# THE OLD TIMER'S BULLETIN

OFFICIAL JOURNAL, ANTIQUE WIRELESS ASSOCIATION, INC.

Published for the Collector, Historian and Old Time Wireless Operator

VOL. 36 FEBRUARY 1995 NO. 1

VALENTINE THOUGHTS

A message comes, I hear it clearly,
It says, "I love you very dearly."

ANTIQUE WIRELESS ASSOCIATION, INC.
BOX E
BREESPORT, NEW YORK 14816

## "The Old Timer's Bulletin" — The AWA Journal

*The Old Timer's Bulletin* is published approximately four times a year, on an all-volunteer basis, by and for members of the Antique Wireless Association, Inc. AWA is a nonprofit historical society founded in 1952 and chartered by the State of New York. *The Old Timer's Bulletin* is available through AWA membership. Its issuance is subject to change from time to time as to frequency, content, and size. This publication does not accept paid advertising. It is not liable in any way for any buying-and-selling transaction entered into as a result of its content.

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**AWA official business, bulletin material and news of non-joint meets:** Bruce D. Roloson, (President and Publisher), 2 Walnut Place, Apalachin, NY 13732, (607) 625-3031. (Exception: column material should go to the column editors.)

**Orders for the *AWA Review* or back issues of *OTB:*** Debbie Roloson, 2 Walnut Place, Apalachin, NY 13732.

**Want ads, coordination of joint meets and slide/video shows:** Richard Ransley (First Vice President), Box 41, Sodus, NY 14551.

**Museum operation:** Bruce Kelley (Curator), 59 Main St., Bloomfield, NY 14469.

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# FROM THE PUBLISHER

**Bruce Roloson**

We've noted the number of requests from our readers to increase the size of type to make *The Old Timer's Bulletin* easier to read. We've listened and acted. Beginning with this issue the point size has been increased to 10-point from 8-point for most of the articles and columns. Remaining at the smaller type size will be the classified ads (just like in the newspapers), and the information on page 2.

Another area in which we have taken corrective action is with the photographs which were much too dark in the November 1994 issue. The *OTB* staff is now using a new electronic scanner to digitize photographs, schematics and line drawings. We believe this will enhance the quality of the graphic items.

We welcome two new editors to the *OTB's* ranks:

• Book reviews will be written or edited by William (Bill) E. Denk, W3IGU, 81 Steeplechase Rd., Devon, PA 19333-1226, (215) 688-2976. If you have a newly published book or have written review please forward it to Bill.

• Restorations will be the specialty of Marc Ellis who is the publisher of *The Radio Collector,* a journal dedicated to radio restoration. Marc is also the author of the "Antique Radio" column in *Popular Electronics.* Please forward any material on restoration to Marc at 1914 Colfax St., Evanston, IL 60201, (708) 869-5016.

Finally, thanks to all who took the time to comment on Al Green, our new editor. Most remarks were encouraging and positive.

## COVER PHOTO

*An old postcard with a theme appropriate to February uses a radio as a prop. Thanks to Joyce Peckham for providing it.*

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# AWA NEWS

## CALENDAR

(AWA-sponsored event dates in **bold** type)

Feb. 18 ..... SCARS, Van Nuys, CA — Auction only
Feb. 18 ..... IHRS Midwinter Swapmeet
**March 11** ..... AWA's W2AN 14mc operation, 1-5 p.m.
**March 25** ..... '95 Spring Fever, Washington, PA
April 15 ..... SCARS, San Diego — Business & Flea Market
**May 6** ..... AWA Spring Meet, Bloomfield, NY
**May 13** ..... Northern NJ Spring Meet, Schooley's Mountain
May 19, 29 ..... Radio Daze '95 at Hotel Seville, Bloominton, MN
May 19-20 ..... Rochester Hamfest, Rochester, NY
May 20 ..... SCARS, San Luis Obispo — Joint Meeting
June 17 ..... SCARS, Los Angeles — Business & Flea Market
Aug. 19 ..... SCARS, Los Angeles — Business & Flea Market

### *OTB* POLICY ON PROMOTING EVENTS

For joint club-AWA meetings (with video/ slide shows, etc.), please send the information to Richard Ransley, coordinator. For stand-alone club events, send items to the *OTB* publisher whose address is on the inside front cover. The format is not critical, timeliness is. This section of the *OTB* is the last to close, about 4-6 weeks before the date of the next issue.

### RECURRING MEETINGS

• **California Historical Radio Society** — Quarterly swapmeets in Ampex Corp. parking lot, Redwood City. Gates open 8:30 a.m. Info: CHRS, PO Box 31659, San Francisco, CA 94131; 24-hour voicemail info: (415) 978-9100. (Info from Mike Adams)

• **Delaware Valley Historic Radio Club** — This SE Pennsylvania club meets, with equipment auction, second Tuesday of month at North Penn Amusement Building, 105 Main St. (Rt. 113), Souderton. Membership $5/yr. For info: PO Box 624, Lansdale, PA 19446, or Jay Daveler, (215) 368-2520.

• **Hudson Valley Antique Radio & Phono Society** — Meets third Thursday of month, 7 p.m. Meeting, swapmeet, and membership info: HARPS, PO Box 207, Campbell Hall, NY 10916, or call John or Linda Gramm at (914) 427-2602.

• **Mid-Atlantic Antique Radio Club** — Meets monthly at New Hope Seventh Day Adventist Church, Burtonsville, MD, Sundays, 2 p.m.. Contacts: Lloyd Kendall, (703) 471-6143, or Joe Koester, (301) 725-4229.

• **New Jersey Antique Radio Club** — Meets second Friday each month, 7:30 p.m. Holds three annual swap meets. Contact (send SASE): Tony Flanagan, 92 Joysan Terrace, Freehold NJ 07728, (908) 462-6638.

• **Oklahoma Vintage Radio Collectors** — Meets second Saturday each month, Spencer's Barbecue Restaurant,

NW 63rd and May Ave., Oklahoma City. Dinner/socializing, 6 p.m.; meeting at 7. Membership, $12/yr., includes monthly *Broadcast News*. Info: SASE to OKVRC, PO Box 72-1197, Oklahoma City, OK 73172-1197, or call (405) 722-0595 or (405) 7554139 eves.

• **Ottawa Vintage Radio Club** — Meets monthly (except June and July) in Conference Room, *Ottawa Citizen,* 1101 Baxter Rd., Ottawa, Ontario. Contact: Tom Devey, 601-810 Edgeworth Ave., Ottawa, ON K2B 5L5, (613) 828-5152. Membership: $10 Canadian/yr.

• **Southern California Antique Radio Society** — New meet times/places: Feb. 18 VanNuys, (auction only); April 15, SanDiego (business & flea market); May 20, San Luis Obispo, (joint meeting); June 17, Aug. 19, Los Angeles, (business & flea market). Info: Floyd Paul, (818) 242-8961.

## ATTENTION ALL RADIO AMATEURS

Special W2AN Millen Transmission

**WHEN:** Saturday, March.11
**TIME:** 1 p.m. to 5 p.m. EST
**FREQUENCY:** 14286 Kc. +/-
**MODE:** AM - SSB - CW

**Notice** — Due to heavy traffic, many amatures were unable to work the station last December. To give as many as possible a contact opportunity, the AM transmitter will be on the 20 meter band at above time. All QSL cards received acknowledged with special Millen memorial card. QSLs to: W2AN (AWA) Station, 59 Main St., Bloomfield, NY 14469.

**AWA NETS (EST)**

**PHONE:**

Sun. 7247 kHz SSB, noon (NCS: N4FS); 3837 kHz, QRP AM, 4 pm, Nov. through April (NCSs: W2ICE & AA2CU)

Tues. 14274 kHz SSB, 2:30 pm (NCSs: KC3YE and W0FXY) 3837 kHz SSB, 8 pm (NCS N4FS)

Mon.-Wed.-Fri.: 3867 kHz, 9:30 am (NCSs: W2ICE & W2SHN)

**CW:**

Daily, 4 pm, 7050 kHz (NCS varies)
First Wed. of each month, 8 pm, 7050 kHz

**2-M REPEATER (Rochester area):**

Mon., 7:30 pm (NCS: W2ICE)
Receive 146.820 MHz; transmit 146.220 MHz

## SERVICE SOURCES AVAILABLE

The AWA Source Sheet lists parts suppliers and services for radio collectors. Cost: No. 10 SASE sent to AWA, Box E, Breesport, NY 14816.

## NEW VIDEO PROGRAM...

... available for club programs. Mike Adams has given AWA a VHS copy of his latest production: *The Charles Herrold Story, Broadcasting's Forgotten Father*. It 's a documentary covering the early work of a pioneer who started broadcasting in 1912. This/other programs available from Dick Ransley, Box 41, Sodus, NY 14551.

## NEW JERSEY MEET

Saturday, March 4, 7 a.m. to 2 p.m.

New Jersey Antique Radio Club, indoor meet, Hightstown, NJ, Saturday, March 4, 7 a.m.-2 p.m., Hightstown Country Club, Exit 8 of NJ Turnpike, (off Rt. 33). From turnpike: east on Rt. 33 200 yds. past Mom's Peppermill, continue ¼-mile to first jughandle; return west. At first light, right onto Monmouth St., then 300 yds. to country club on left. Rates: sellers, $12/table (for members, $15/others); buyers, $2 admission. Food/beverages. Mention "radio meet" for reduced room rates at Town House Motel, Rt. 33 (800) 922-0622, or (609) 448-2400. Also, Ramada Inn across street (609) 448-7000. Meet contact: Jim or Onalee Fisher, (908) 725-7476. Reservations needed for tables; send a check by Feb. 27 payable to NJARC, 344 Harrison Ave., Manville, NJ 08835.

## INDIANA HISTORICAL RADIO SOCIETY MIDWINTER SWAP MEET

Saturday, February 18, 1995

Meet will be at Indianapolis Holiday Inn Southeast, Exit 52 south (Emerson) on I-465, 7:30 a.m.-3 p.m. EST. On site, same day registrations only. Special room

*Continued on page 40*

# ANNUAL CONFERENCE

## THRUWAY MARRIOTT, ROCHESTER, NY, SEPT. 6-9, 1995

WELCOME BACK! At the 34nd annual conference, collectors and history enthusiasts will convene, exchange equipment, and learn more about the development of radio and electronics. If you have never been to the yearly "reunion," why not give it a try? Rochester (Henrietta) is just north of upstate New York's beautiful Finger Lakes region, easily reached by car or plane. The site is 26 easy miles from the AWA Museum at Bloomfield.

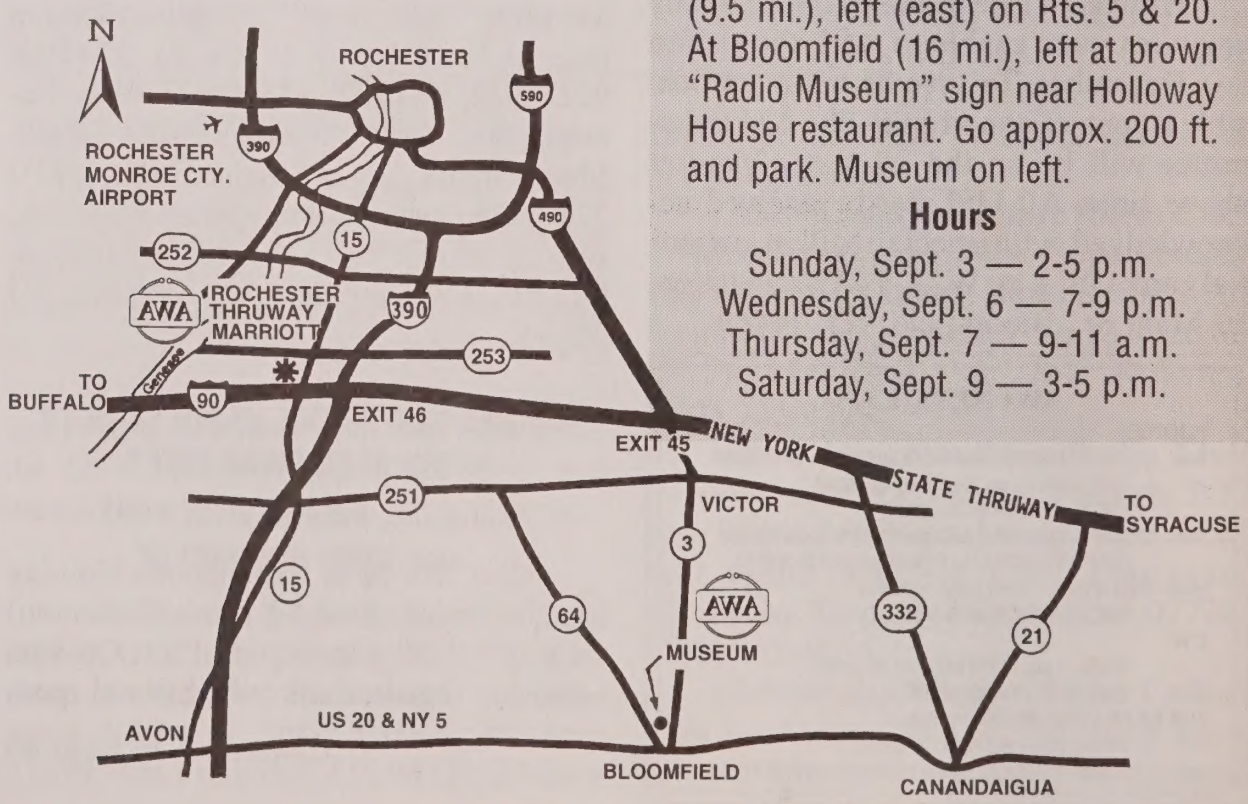
Advance registration is encouraged. This will allow preassembly of registration material for quick check-in, and preassigmnent of flea market spaces. Preregistration, using the enclosed card, can be made through Richard Ransley, Box 41, Sodus, NY 15441 before August 28th. Unlimited registration at the door.

The Thruway Marriott is a full-sized, full-service hotel. It offers special nightly rates ($80 single, $90 double, $90 triple, $100 quad) up to August 15. For info or reservations, call (716) 359-1800. The Marriott has high-quality restaurant facilities, and other lodging and eating places are nearby.

The hotel is reached from Exit 46 of the New York State Thruway (1-90): take I-390 north to NY 253 west, to NY 15 south. For visitors arriving by air, the location is about seven miles or 15 minutes from the airport. There is shuttle service, 7 a.m.-11 p.m. (specify the Thruway Marriott).

**The special theme for this year is "100 Years of Radio."**

**Conference Chairperson: Bill Fizette**
**Program Chairperson: Lauren Peckham**
**Contest Chairperson: Ralph Williams**




### AWA Electronic Communications Museum Village Green, Bloomfield, NY

Refer to map at left. Directions from hotel: Right (south) on Rt. 15. At Avon (9.5 mi.), left (east) on Rts. 5 & 20. At Bloomfield (16 mi.), left at brown "Radio Museum" sign near Holloway House restaurant. Go approx. 200 ft. and park. Museum on left.

**Hours**

Sunday, Sept. 3 — 2-5 p.m.
Wednesday, Sept. 6 — 7-9 p.m.
Thursday, Sept. 7 — 9-11 a.m.
Saturday, Sept. 9 — 3-5 p.m.

# HEADPHONE UPDATE

**By Dick Mackiewicz**
1549 North River Rd., Coventry, CT 06238

## CHICAGO, CONNECTICUT HEADPHONE MANUFACTURERS

Information supplied to me by Ross Smith of the CrS-Turner museum indicates that Chicago Telephone Supply was a prolific manufacturer and supplier of headphones and headphone parts. All of CTS' aluminum case phones had one common diameter and thread size. Naturally, caps and diaphragms are interchangeable among these phones.

Here are some of those phones, all manufactured by CTS: Featherweight Twin Tone; Grandtone; Little Spitfire; Meteor; The Rex; Superette; Tower Scientific; Frost 174 and Frost 175.

All phones marked "Comecticut" were manufactured by Connecticut Telephone, Meriden Comecticut, also well known for manufacturing the Sodion tubes. Comecticut Telephone is one of the very few manufacturers that ever placed their company identification on internal phone parts. Here is a partial list of their phones: Comecticut 3k (2x 1500), R15; Comecticut Tel & Elect. with HB-4 band, 2k; Comecticut 5313A, 3k; Coruiecticut Tel & Tel Co. Meriden, Conn. USA, No. 607R, 2k, Pat. Dec. 31 1918; Comecticut Tel & Electric Corp, Meriden, Conn., R2A, Signal Corps, 2k; Comecticut 2.5k, lightning bolt design.

I would appreciate corresponding with any "old timers" who ever worked for headphone manufacturers such as Brandes, Murdock, Cannon, or any others who might wish to contribute to my research on phones.

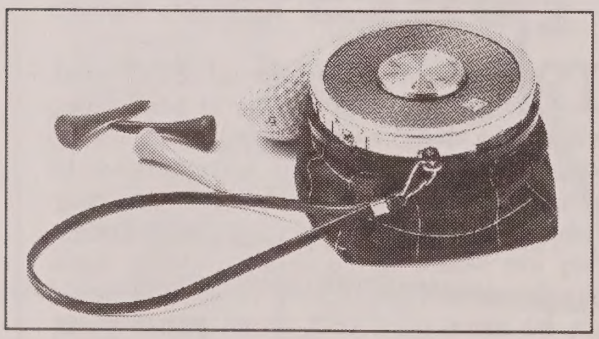
*A 1926 Frost-Fones advertisement in which the Models 174 and 175 referred to by the author are listed as $3 and $3.50, respectively.*

# MODERN DESIGN NEED NOT BE BORING

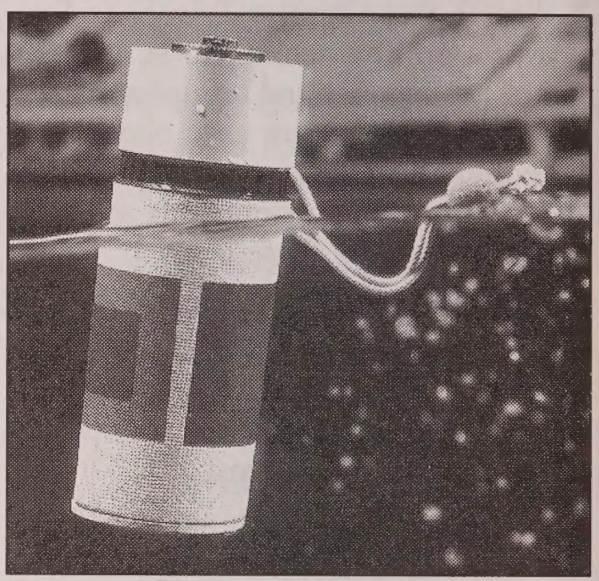
**John Okolowicz**
624 Cedar Hill Road, Ambler, PA 19002

The name Marlan Polhemus meant nothing to me until I met Tucker Madawick. Tucker, a dapper gentleman in his 70s with a distinguished handlebar mustache, is a retired RCA vice president living in a very active retirement community on Florida's west coast.

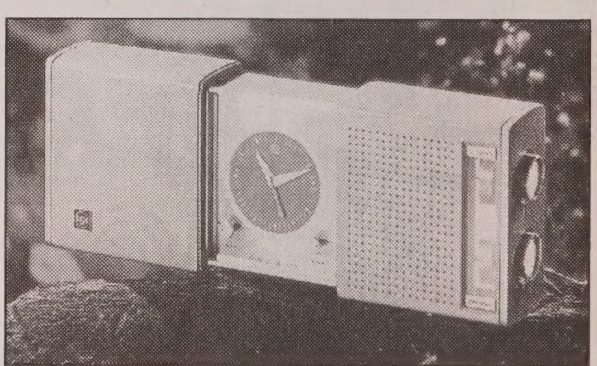
Bubbling with enthusiasm, his busy schedule would tire a wannabe executive 50 years his junior. I was lucky enough to get a brief meeting with him at his home and was immediately struck by the dynamite looking goblet-shaped transistor clock-radio (model RZD311) that was prominently featured in his display case of RCA memorabilia. Even though I am not a transistor radio collector, this caught my eye. Made in the early '70s, it was a far cry from the "kitsch" infecting most transistor designs of that era. The RCA brochure for this family of products advertised "More-Than-Radio Radios" and the reader can see why.



Tucker's excitement grew along with my interest. "Marlan Polhemus was responsible for that design as well as many, other outstanding works at RCA," he explained as he simultaneously retrieved **The Beanbag** radio out of a nearby drawer. It was a beautifully crafted radio in a beanbag-ashtray motif. Then Tucker reached for his old RCA catalogs to point out the many other designs that had Marlan's distinctive touch. For example:

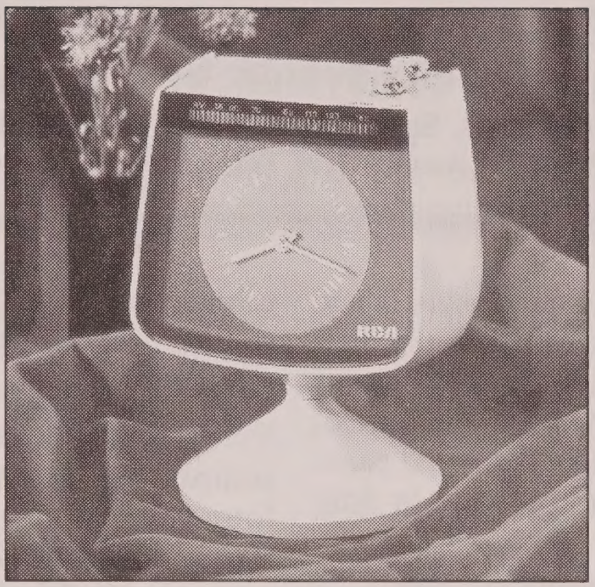


• **The Floater** (model RZG-28) was a pioneer design for a floating radio, the perfect companion for poolside accompaniment. Marlan, in a conversation with the author, confided, "The set was manufactured in Japan at a time when they had difficulty in making the seals waterproof," Tucker said, "so, unfortunately, many of them leaked and were returned to RCA."



• **The Journey,** advertised as "a gadabout AM clock radio with a handy open and shut case" was unusual in that it slid open to expose the clock.

• **The Million Miler** (model RZS-321), an AM/FM clock radio for travel folded open to expose a smart layout.




• **The Camper** (model RZG-354) was another fresh design for an all purpose portable utility radio that included a high beam flashlight, perfect for a family camping experience.

In Tucker's living room was a late 1970s Color TV (model GC-930 R) housed in a very Art Deco-styled hat box-shaped console. Painted jet black lacquer with a highly polished surface, it had definite "wow" appeal. It looked better today than anything designed before or since. Yes, you now know who did that, too.

These were all done at a time when design in general had hit bottom in terms of freshness and vitality. Stark, machine-like, designs were de rigueur in this era. Radios were commodities housed in sterile, faux-mahogany plastic boxes with chrome plated plastic knobs and sparse chrome trim. These radios were another reflection of the dreaded "modern architecture" that was slowly remaking cities into collections of towering concrete and glass boxes, infuriating authors like Tom Wolfe (*The Right Stuff* to write *From Bauhaus to Our House* in protest.

Marlan was an "outsider" hired by Tucker on a consulting basis to bring some creative juices into his design department. Marlan did that for sure, and more.

He graduated from the Pratt Institute of Design in New York City in 1956 and went right to work for General Motors' styling section — every designers dream job. Marlan had been lucky enough to work for two of the legends of design: Harley Earl, the creative genius behind tail fins, two-tone paint, and the Corvette; and Dave Chapman, the chief designer for Montgomery-Ward during the creative 1930s and whose firm was the predecessor of today's Goldsmith Yamasaki Specht Inc. Marlan is now vice president and part owner of this respected Chicago design firm.

Ahead of his time, Marlan gave us a glimpse of the 1990s 20 years ago with his design for the G-2000 TV. This turned out to be a limited edition set (only 2,000 made) for which he received the WESCON award.

He has won many other awards for packaging radio and TV components. A more recent example being the 1992 Good Design award presented by the Chicago Anthanaeum for his Advent Speakers and Lloyd's CR-400 intercom/clock-radio.

Just to show you that he is not just a consummate electronics component designer, he won a few awards plus a write-up in *Metropolitan Home* magazine for the My Way dispenser, a very futuristic tape dispenser, for the Tenex Company in 1987.

# THE TRANCEL TR-80

**By Norman R. Smith, Transistor Radio Collector**
7203 17th Avenue NW, Bradenton, FL 34209

Toshiba Corporation of Tokyo, Japan, was a very successful manufacturer and distributor of transistor radios in the late 1950s. One of their product lines was marketed under the brand name Trancel, and it was sold mainly in drug stores.

These Trancel sets were comparable to and, in many cases, shared the same chassis design as its Toshiba counterpart. The styling and colors were well executed and made for a product with eye catching appeal for the impulsive buyer who might see them on display at the store.

The Trancel TR-80 was an excellent example of just how good these small Japanese radios could be. The cream-colored, reverse-painted clear plastic dial, accented with gold trim, is a real eye catcher, and it is well balanced by the perforated metal speaker grille that completes the front styling. The cabinet was available in black, white and red, and also had the convenient flip-out stand on the back.

Excellent color photos of this radio's companion, the Trancel TR-60, can be found on pages 28 and 53 of Roger Handy's book *Made in Japan.* Both radios share identical features except for the "6" instead of the "8" transistor designation on the set's front.

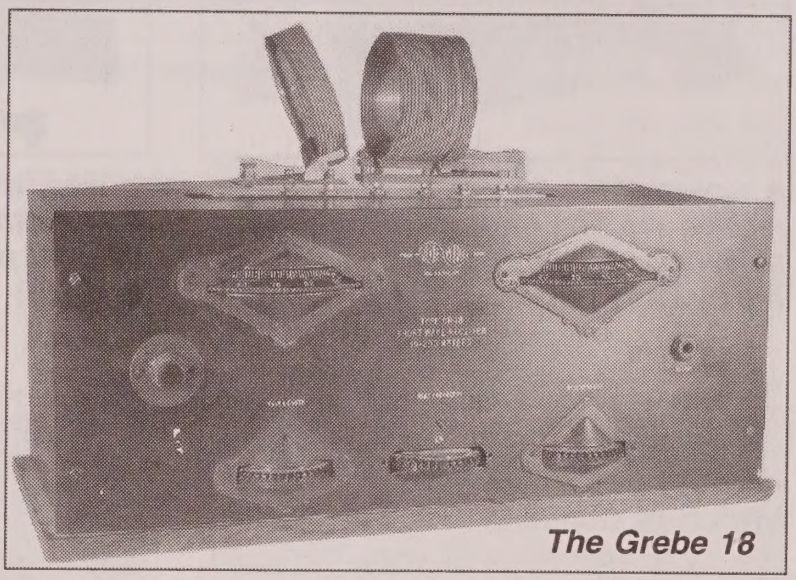
The TR-80 is a typical modern superheterodyne receiver and is an average performer. The tuning is accomplished with a thumbwheel on the right side of the set. The vernier-type tuning makes the job easier to do than on many small sets, but the small size of the on-off thumbwheel makes turning the radio on or off quite difficult.

Many of these Trancel TR-80 sets have survived the 35 years since they were made which says much for the quality of their design and construction.

# THE GREBE 18 SHORTWAVE RECEIVER

**By Bruce Kelley**
W2ICE

Some collectors call the period between the Grebe 18 and the National HRO-500 the classic era of American-made shortwave receivers. Both sets are rare and highly collectible. The A.H. Grebe Company released the two-tube CR-18 in early 1926. Although *QST* and other magazines had earlier published a receiver designed with plug-in coils, the CR-18 was one of the first available commercially. Aero came out with a kit about this time, and a year later Pilot marketed the three-tube Wasp followed by Silver-Marshall with its Round-the-World 411 with the new UX-222 screen grid tube.

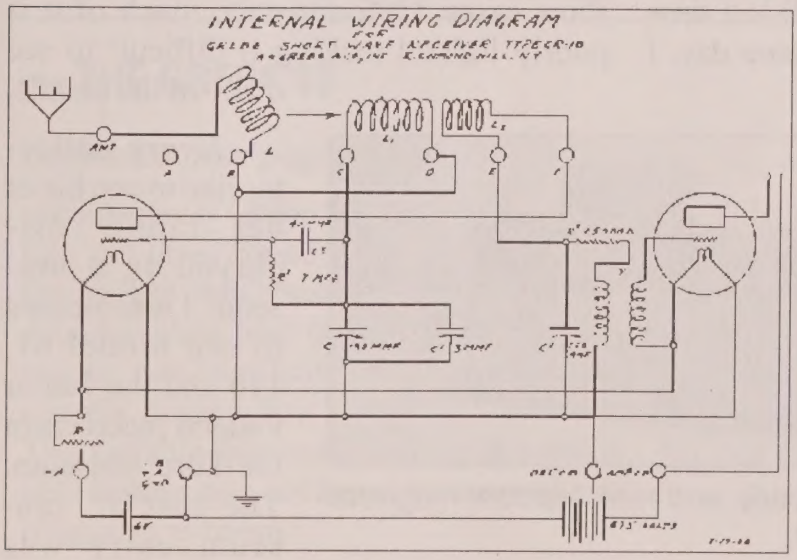


*The Grebe 18*

The early '30s saw two modern design receivers using a stage of shielded tuned-grid RF, the Pilot Super-Wasp and the National SW-3. The AWA Museum has all the sets mentioned, with the SW-3 heading the list for stability, band spread, ease in tuning and smoothness in regeneration. I've used the SW-3 in several AWA OT Contests, but I confess there was a need to reduce the antenna to six feet because of heavy signal blocking.

The CR-18 covers 8.5 to 216 meters with five plug-in coils. Frankly, I found the set a poor performer in the 10 meter band since tuning in the few stations heard was difficult. Both the tuning dial and regeneration control had to be held while copying most signals. On the lower bands the set performed well. Fortunately, the designer included a small variable condenser ($C_1$) for fine tuning.

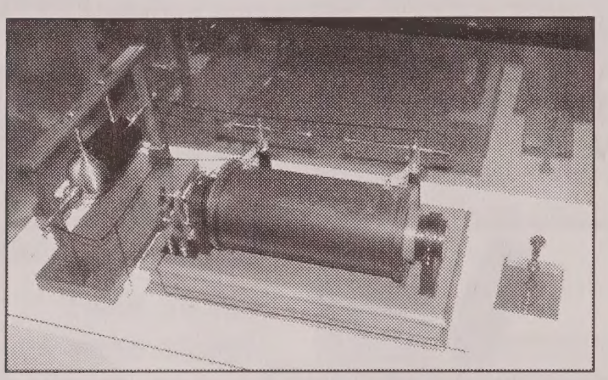
I question the long leads to the coil pins, possibly acceptable on 80 and 160 meters, but inefficient on 10 and 20 meters. The tuning condensers and dials are mounted vertically as on the

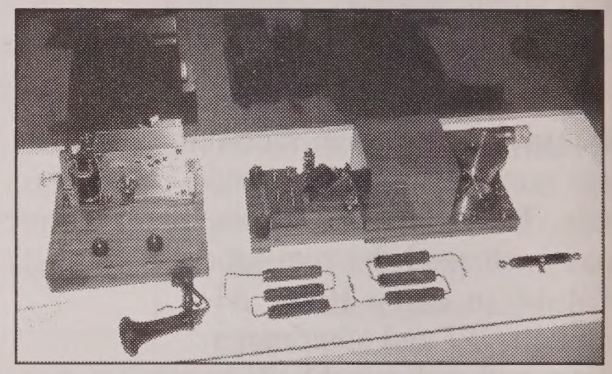



*Continued on page 13*

# THE MICHIGAN SPRING MEET

**By Larry Babcock**
8095 Center Lane, East Amherst, NY 14051





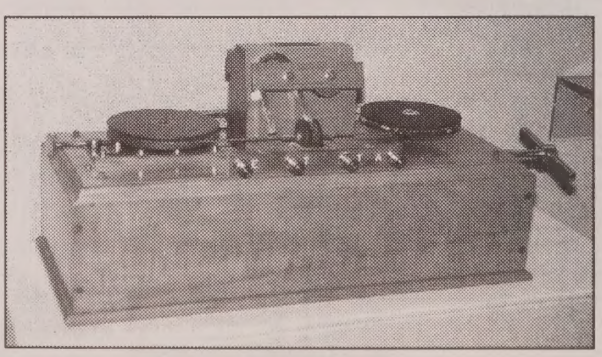
*A replica of the transmitter (left) and receiver used by Marconi with a kite antenna to receive the first transatlantic message in 1901. Both items are in the Henry Ford Museum in Greenfield Village near Dearborn, MI. (All photos accompanying this article are by Larry Babcock)*

I like to attend a radio meet about once a month during the summer, and for April 1994 decided on the spring Marc Meet in Dearborn, MI. The Michigan club is very active and well organized, and I had heard of the fine exhibit of early radios at the Henry Ford Museum in Greenfield Village. This would give me a chance to see it.

I drove west through Canada to the meet and returned on a U.S. route and found the Canadian route 100 miles shorter. From Buffalo I was able to make the trip in five hours which still left time to see the Ford museum the same day. I must tell you, however, that to see the entire museum takes some four hours. Greenfield Village is best seen in another eight-hour day. Both are well worth the time.

When I got to the museum I asked for directions to the radio exhibit. No one at the entrance could tell me where to go. They directed me to another person who also was not sure. To avoid this confusion, the radio section is at the back of the building in the communication section behind the telephones, telegraphs and similar items.

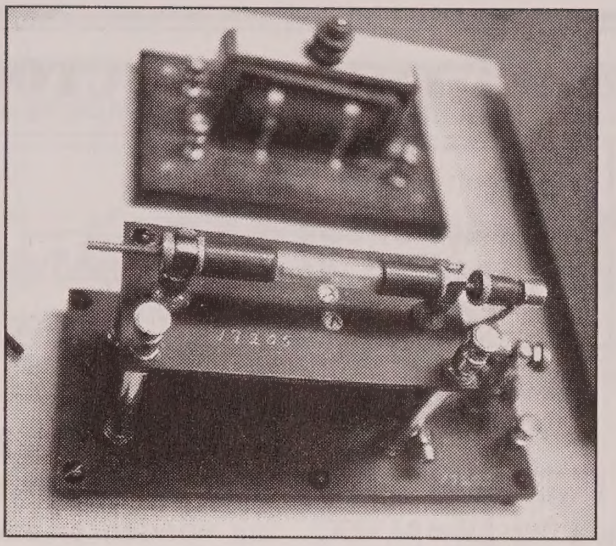
There are some very nice early radio artifacts on display. I had intended to take a few pictures here and more at the Marc Meet, but I ended up using both of my rolls of fill in the museum. There are some beautiful and rare equipment displayed in show cases. Unfortunately, much of it is poorly lighted making it difficult to see many of the details.



*A very early and rare Marconi magnetic detector.*

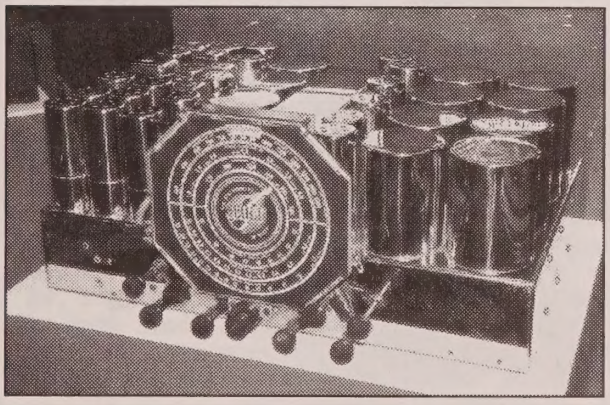
Every collector like to see his or her radios displayed in a museum. I was pleased to see Model 61, 110 and the Junior Federal receivers in the Ford Museum. The cost of museum entry was

$10.50 for seniors. Don't let the price deter you. The museum is well worth the cost. While there you may find the phonograph exhibit interesting, as well as the early radio phonographs. If you are ever near Dearborn, you should not miss this museum.

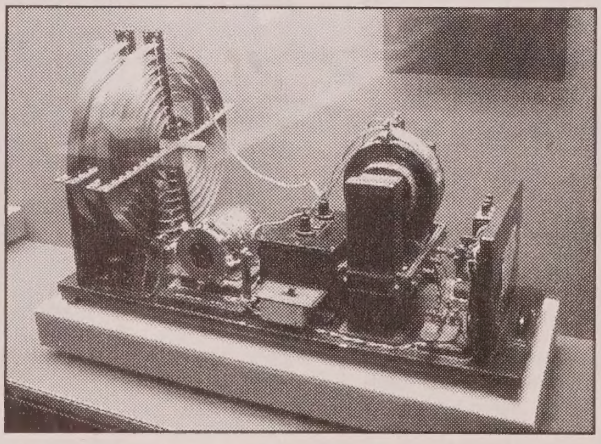


*An early coherer detector and stand.*

The Marc Meet opened for buyers at 8 a.m. There were some 100 cars parked in the lot and 75 tables set up inside the Armenian Community Center on Alter Road. The building was nearly filled with flea market items. There were not many radios that did not plug in except for the newer transistor stuff. Not much in the line of historical, vintage equipment was offered. Still, you could have bought a very nice Paragon Type Two set for $400. There was also a Grebe CR9 for sale. The star attraction item ready for purchase was an RCA Radiotron doll, the one with a tube for a hat. It was in beautiful condition and in a nice display case. The asking price was $1,200. It was still on the table when I left.



*An E.H. Scott receiver.*



*A very early spark-gap wireless station.*

## — THE GREBE 18

*Continued from page 11*

contemporary Grebe Synchrophase. A feature not often found in receiver design is the 25,000 ohm resistor in series with the detector plate lead to the AFT for minimizing non-oscillating points, which frequently occur when a RF choke is used. The variable antenna coupling is a desirable feature, one not found in conventional plug-in coil forms.

The CR-18 was short-lived with the advent of the UX-222 screen-grid tube which offered a stage of RF isolating the detector from the antenna. The set is highly prized by collectors, and like later National receivers, owners pay a premium for extra or missing plug-in coils.

# MEET THE COLLECTOR

**EDITED BY**

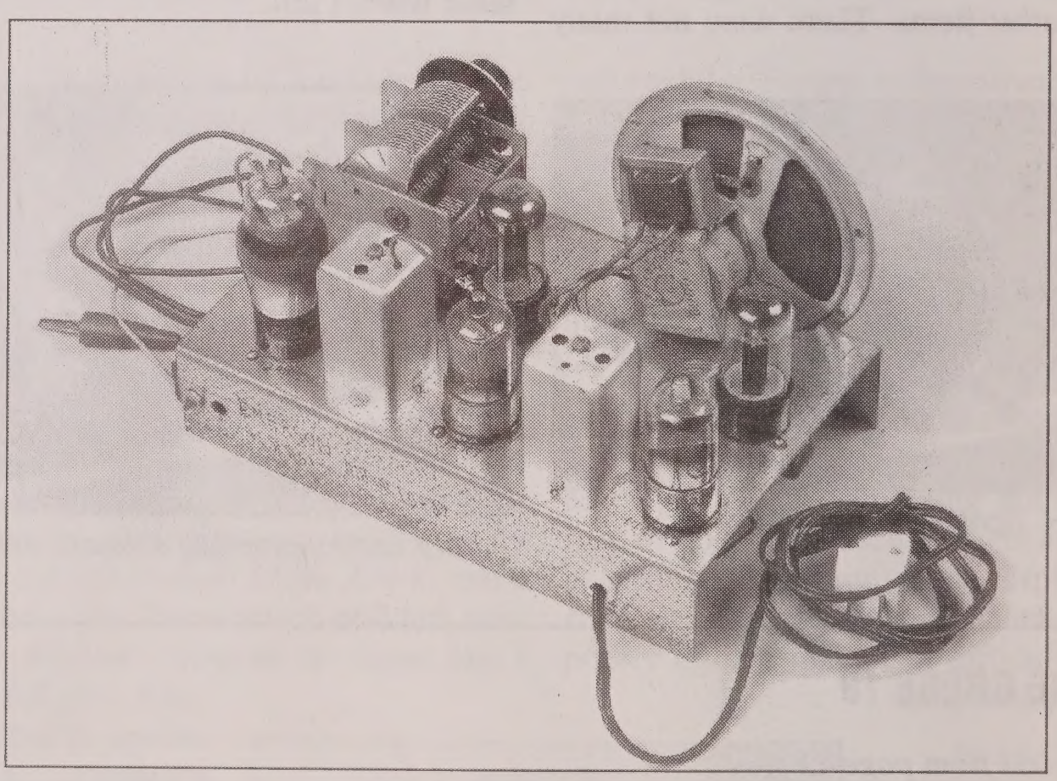
Rodney Schrock KD3OR
402 Lincoln St., Somerset, PA 15501
Please include SASE for reply.

## THE EMERSON CR261

Some time ago I was struck by the idea of building a five-tube AC-DC set of pre-World War II vintage using tubes of the last generation before the debut of the famous 12SA7 family.

So, I picked the Emerson CR261 using the 12A8, 12K7, 12Q7, 5OL6 and 35Z5 tubes. The layout and wiring are basic, and I used a two-section 365pf tuning condenser and padder, and also a Meissner 14-1026 antenna coil.

The radio was nothing spectacular, performing as well as a regular five-tube set, but was a fun radio to listen to "golden oldies." Besides, music sounds better on a dynamic speaker.



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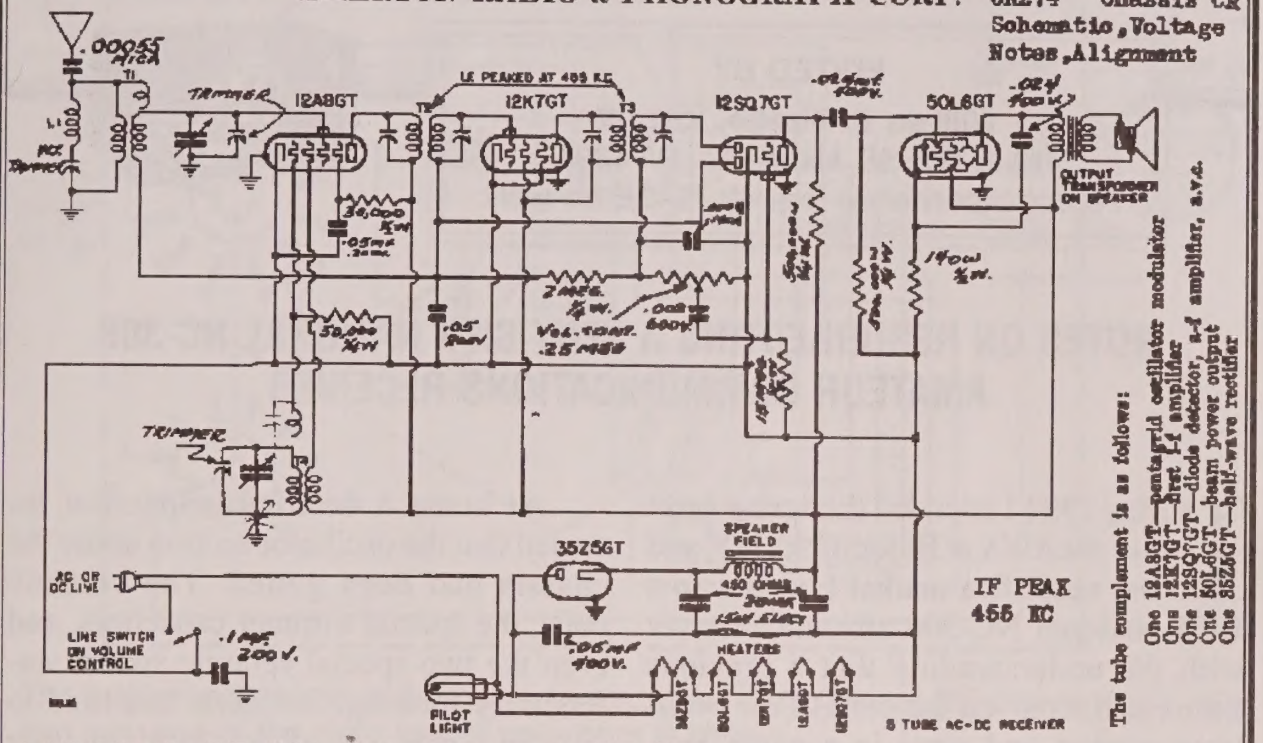
1926 Ad

EMERSON RADIO & PHONOGRAPH CORP.

MODELS CR261, CR262
CR274 Chassis CR
Schematic, Voltage
Notes, Alignment




# MODELS CR-261, CR-262 and CR-274

Voltage rating ..... 105-125 volts, a.c. or d.c.
Power consumption .... 80 watts.
Frequency range ..... 540 to 1730 kc.

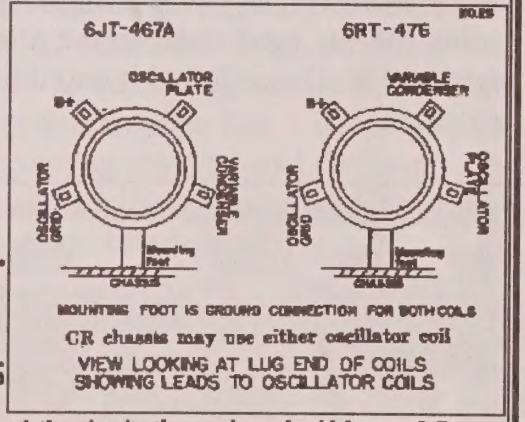
CHASSIS MODEL CR

## ALIGNMENT AND LOCATION OF TRIMMERS

IF. 455kc through .01 mf. cond. to grid of 12A8G 1st IF, top of chassis right of speaker; 2nd IF under chassis beneath variable, holes provided in top of chassis.-Variable max. cap. Adjust trimmers to max. response.

Wave Trap(see GENERAL NOTES) Feed 455kc through .0001 mf. cond. to ant. lead. Adjust for minimum response.

RF. Dial at 140. Feed 1400kc through .0001 mf. cond. to ant. lead. Adjust osc. trimmer(rear section of variable), then ant. trimmer (front section of variable) for maximum response.




## GENERAL NOTES

1. If replacements are made or the wiring disturbed in the r-f section of the circuit, the receiver should be carefully re-aligned.
2. In operating the receiver on d.c. it may be necessary to reverse the line plug for correct polarity.
3. The color coding of the i-f transformer leads is as follows:

| | |
|---|---|
| Grid—green | Plate—blue |
| Grid return—black | B plus—red |

4. The wave-trap in the receiver has been adjusted for maximum signal rejection at 455 kc. If, however, persistent interference is experienced from some particular telegraphic station, readjust the wave-trap trimmer until the response from the interfering station is at a minimum.

## VOLTAGE ANALYSIS

Readings should be taken with a 1000 ohms-per-volt meter. Voltages listed below are from point indicated to B minus (switch) with the volume control turned on full and no signal. Line voltage for these readings was 117.5 volts, 60 cycles, a.c. All readings except heaters and cathodes were taken on 250 volt scale. Measurements made with 117.5 volts d.c. will be lower than those given below.

| *Tube* | *Plate* | *Screen* | *Cathode* | *Osc. Plate* | *Fil.* |
|---|---|---|---|---|---|
| 12A8GT | 88 | 45 | 0 | 88 | 12 |
| 12K7GT | 88 | 88 | 0 | — | 12 |
| 12SQ7GT | 40 | — | 0 | — | 12 |
| 50L6GT | 82 | 88 | 5.7 | — | 50 |

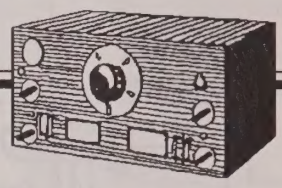
Voltage at 35Z5 cathode—115 volts. Voltage across speaker field—27 volts. Voltage across pilot light—4.5 volts.

©John F. Rider, Publisher

# THE COMMUNICATIONS RECEIVER

**EDITED BY**

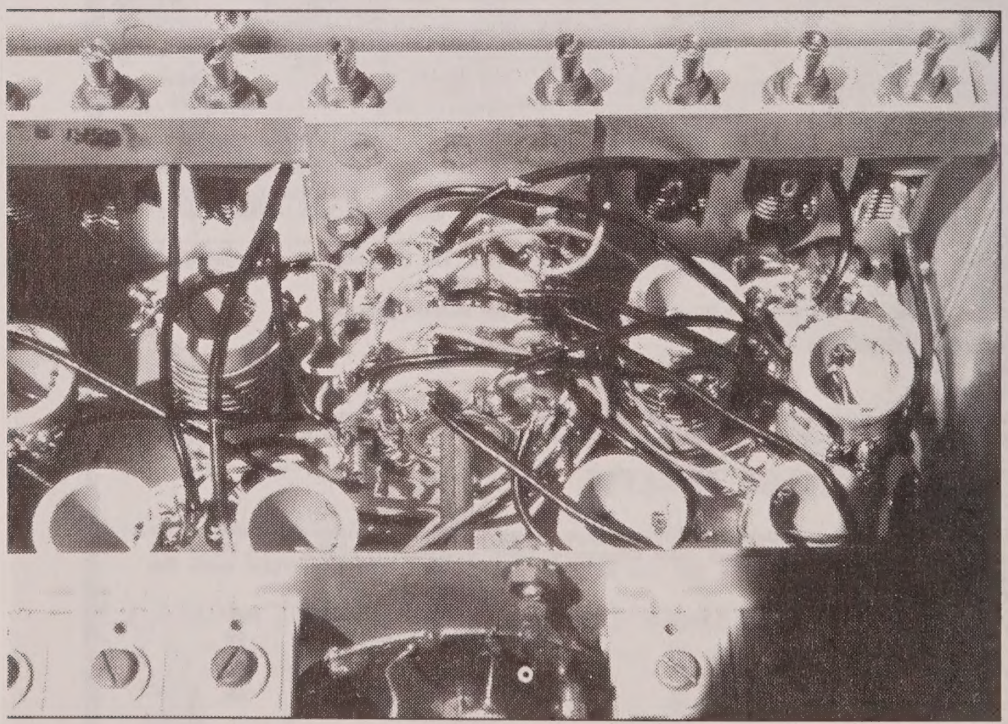
**William B. Fizette, K3ZJW**
RD 1, Box 55, Henryville, PA 18332
All correspondence requires SASE for reply.



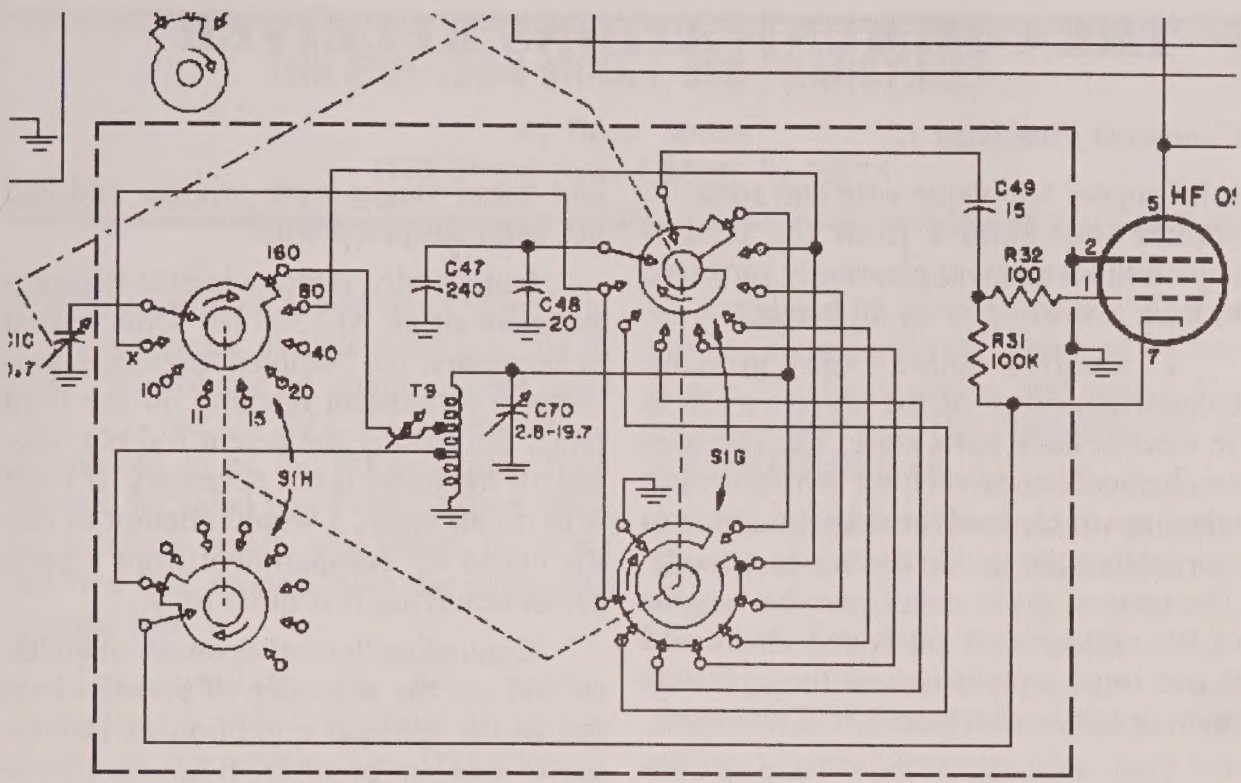
## NOTES ON RESURRECTING A VERY SICK NATIONAL NC-300 AMATEUR COMMUNICATIONS RECEIVER

In May 1994 I attended the spring meeting of the AWA at Bloomfield, NY, and at the small flea market I picked up a 1955 National NC-300 amateur receiver with the understanding that a previous owner had removed the coils of the oscillator section and were in a paper bag. (Please don't ask; no one seemed to know why.) However, my reasoning or justification for buying it was that the price was right and if all else failed it could be a set for parts.

At home a detailed inspection revealed that the oscillator section under the chassis had been gutted. The ceramic coils, the special trimmer capacitors, and even the two special ceramic switch wafers were missing. Someone had tried to wire in some sort of nonstandard fiber switch wafer and they butchered the aluminum mounting plate. They jammed and totally confused the bandswitch mechanism and the drive chain was missing. On the plus side the coils, the variable trimmer capacitors, and the partial remains of one switch section were available (in the paper bag, remember?). While the rest of the receiver looked to be all there, this was really a head-scratching situation. It was obviously going to take much repair time. The special switch wafers were missing, and I asked myself whether another NC-300, the "Dream Receiver" of the 1950s, was really worth it.



*The rebuilt oscillator section of the 1955 National NC-300 showing the four customized switch wafers that replaced the two originals. (Photo by William B. Fizette)*




*The original schematic of the oscillator section of the National NC-300 receiver. Note that only one of the eight sets of coils/caps is shown.*

I decided to play it by ear. Finding a parts set somewhere might be possible, so I put out the word for the switch wafers. Nevertheless, the problem was that any parts' chassis was outside my geographic area, and removing the two wafers was a long and involved task which I was reluctant to ask someone else to do. So I went to my junk box, looking for switch wafers which would fit and could be rebuilt. No luck; the National wafers were a nonstandard size, and with a nonstandard detent. That left the summer hamfest route, so I fixed the appearance of the switch wafer in my head and trusted to luck.

Fortune smiled. Sometime in June I ran across a large box of wafer switches, and within it was a single multigang switch with the correct size wafers, apparently removed from some piece of test gear. Close inspection revealed that four of these sections, with some wafer rebuilding, would perform the functions of the two National originals, and that there was just enough space for them to fit in. Hardware would come from the junk box and a new mounting plate could be made from a piece of aluminum scrap. At this point I decided to repair the receiver, with the tacit understanding that I accepted it as an interesting project and a challenge, and not with any idea of monetary rewards.

Let me emphasize that a key to the successful completion of any project such as this is to have a good receiver on the bench to use as a pattern; it is highly unlikely that one would be successful with just a schematic diagram. I knew where I could borrow a good NC-300, and with this and the parts I was ready.

The first step involved tracing the wiring and the wafer construction of the good receivers, making a specific diagram which included each connection. Then I gradually integrated the replacement wafers, S1-G and S1-H, on the accompanying wiring diagram, into the oscillator layout of the restoration. A magnifying glass and a good light were essential. The bandswitch wire used was high quality #18

*Continued on page 18*

*Continued from page 17*

solid copper telephone wire and some 75 connections later I fired the bench-haywired set and was pleasantly surprised to have it work . . . on all bands.

I finally found the missing bandswitch chain of the correct pitch at an electric lamp parts store. The complex mechanical bandswitching mechanism as taken apart, cleaned, and finally made to work using the good receiver as a guide. The manual gives details on the lengths of the replacement cords and chain, and if one must replace one of these, follow them exactly, otherwise it will not work.

The remainder of the set appeared to be original except for the main electrolytic can that earlier had been replaced. Even the original yellow Astron bypass caps were there and tested positive. However, seven of the resistors were out of specification on the high side and had to be replaced. With this routine out of the way, the set was aligned and it seemed to track well. The overall performance was somewhat better than that of the receiver I had used for reference purposes.

Rebuilding a switch wafer is not very difficult if one has the parts, the hardest job being to decide just what is to be accomplished. The original contacts were held with rivets, but using miniature bolts is much easier. Here I had a couple of extra wafers, giving me a source of the extra parts I needed. The shorting wafer, a part of S1-G, was a challenge until I found a piece of the original wafer with a bent-up blade in the notorious paper bag. They carefully straightened and fit the blade to the fourth wafer.

To help the restoration I removed the front panel and the RF compartment so I could work on it freely. By comparison with the good set I learned that the RF and mixer stages were original and had not been tampered with.

Incidentally, if removing the RF compartment of an NC-300 for some reason is necessary, the National engineers provided a convenient opening on the front panel for pulling the detent rod out; taking off the panel is not necessary. If I had it to do all again, I would attempt to buy the entire RF compartment from a parts set as removing it is quite easy.

Contacting the earlier owner of #0709 to find out the sequence of events which led to the unusual condition of this receiver was not possible. It appears, however, that the bandswitch jammed, and in forcing it the switch was broken. An attempt to repair it failed, and the owner apparently gave up.

The NC-300 is considered the poor man's answer for amateur work using tube gear compared with the now very expensive Collins 75A4. It is stable, sensitive, and selective and works well on both AM and SSB, and also CW. An excellent reference article on the NC-300 by Dennis Petrich, K0EOO, is in *Electric Radio* #41, September 1992.

A closing observation: I understand that the situation described here is an unlikely event and will probably never be repeated. It is presented as a specific example of a general restoration approach. By far the best way to restore any piece of electronic gear is to take good parts from an original matching parts set. If this is not practical, it is possible to adapt and even rebuild parts. Of course, the time spent can be all out of proportion to the monetary value of the end product, which was certainly the case here, so choosing such projects carefully is wise. Still, it can be done.

# THE EMERSON MODEL 888 TRANSTIMER

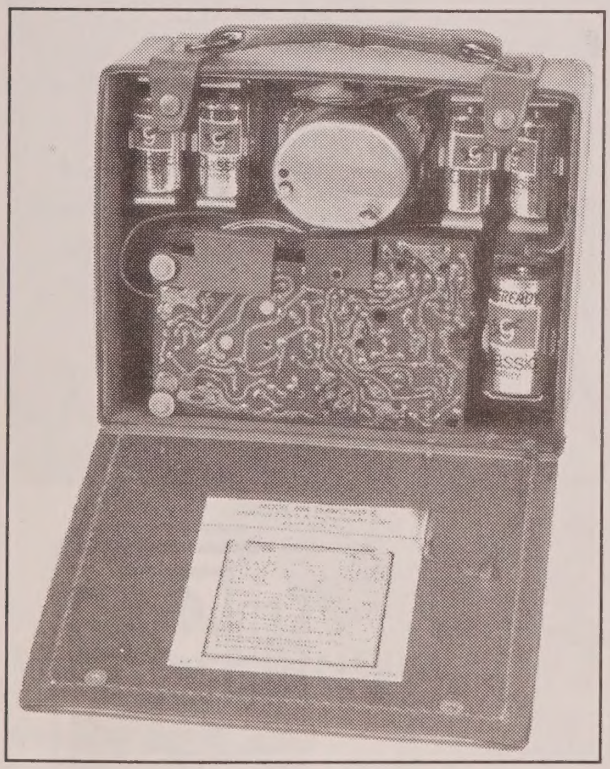
**By Ross Smith**
1133 Strong Ave., Elkhart, IN 46514

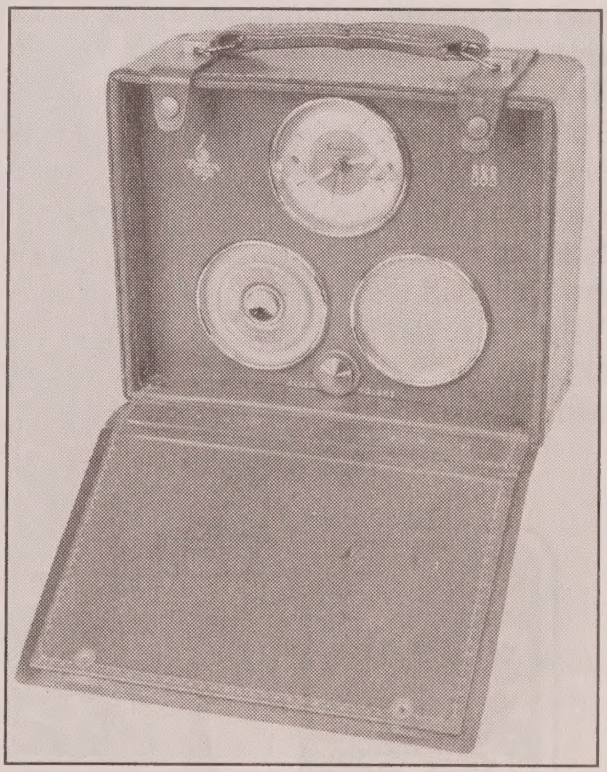
The Emerson Model 888 Pioneer and Vanguard models were covered in the Volume 22, summer 1994 issue (Vol. 22, No. 2) *ARCA Gazette* which turned out to be the publication's final edition. Included was a chart listing chassis numbers, years, and names covering the five 888 models plus the extension speaker box.

To complete the 888 series, Transtimer I and Transtimer II are included in this article. The Transtimer I, chassis number 120416, released as a 1958 model, was available in a top-grain cowhide cabinet in saddle tan color. Its measurements are 8¾ inches wide, 7 inches high and 3½ inches deep. Advertising promoted it as a radio having unsurpassed performance plus an independently operated seven-jewel precision clock. The radio has eight transistors powered by four size "C" cells in series, and uses a 3½-inch PM speaker. The clock runs on an AA mercury battery.

Transtimer II, chassis number 120472, is a 1959 model that is identical to the Transtimer I, except the clock, the clock battery and the radio knobs. Colors available were saddle tan and black leather. With the clock is a switch for "on/off" and "sleep"functions. The clock battery size is a "D" cell.

Folder 11 of Sam's set 509 dated December 1960 covers both sets. The set pictured is a Transtimer II belonging to Charles Miller of Elkhart, IN. (Pictures courtesy of CTS-Turner Museum by Joe Carlson.)





# AMATEUR RADIO

**EDITED BY**

Mike Raide, KF2MW
Box 181, Bloomfield, NY 14443
Please include SASE with correspondence.

## OLD-TIME CW CONTEST
## A Memorial to Linc Cundall, W2LC

**Dates and times** — 6 p.m. Feb. 22 to 6 p.m. on Feb. 23; 6 p.m. Feb. 25 to 6 p.m. on Feb. 26.

**Objective** — Contact the greatest number of AWA members. When calling use "AWA AWA AWA de W2AN," as an example. On contact exchange year of equipment, such as "TX 36" for a 1936 transmitter and "RX 34" for a 1934 receiver. Send "MOD" for modern (1942 or later) gear.

**Rules** — A station will be scored only once on each band. Nonmember contact and stations nor submitting logs will not count.

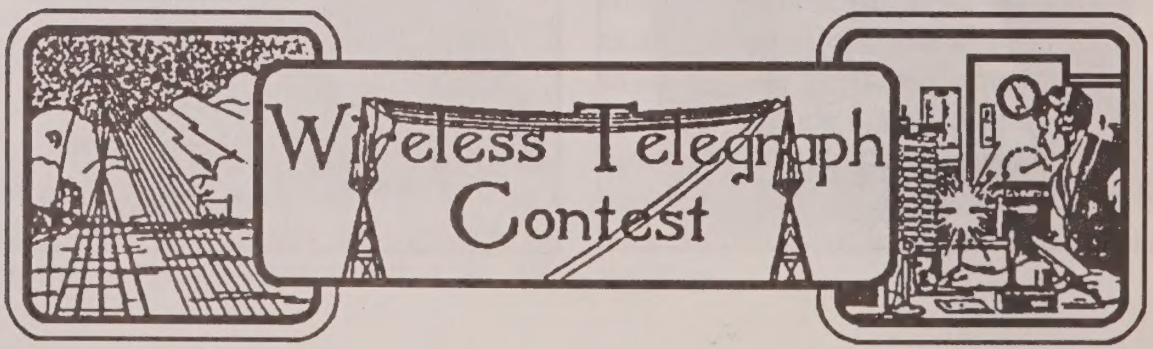
**Frequencies** — 1800-1820, 3580-3600, 7030-7050, and 14060-14070 kHz, ± QRM. Concentrate 20- and 160-meter contacts on the hour.

**Scoring system** — *QSO Zones:* "E" eastern zone, US districts 1, 2, 3, 4, 8, 9, plus VE1, VE2, and VE3; "W" western zone, US districts 5, 6, 7, 0 plus VE4, VE5, VE6, and VE 7. *DX zone:* All others.

*Continued on page 21*

### OT CONTEST FOR EVERYONE WHO WORKS CW

The annual OT CW Contest is a once-a-year opportunity to contact fellow members on popular CW bands. One need not be a high-speed artist since many participants operate at a casual speed of 12 words per minute. A fair percentage use Kenwood, ICOM, and other modern transceivers, although one is encouraged to use vintage equipment. When using modern equipment, please keep input down since some vintage receivers cannot cope with S9 + + signals in heavy QRM. To simplify scoring, write for a contest log sheet from Mike Raide, KF2MW, or Bruce Kelley, W2ICE, 59 Main St., Bloomfield, NY 14469. Photos of contestants early RX or TX are welcome for possible publication.



*Continued from page 20*

*QSO points per contact, by zone:*

| | |
|---|---|
| "E" to "E" or "W" to "W" | 1 point |
| "E" to "W" or "W" to "E" | 2 points |
| "E" or "W" or "DX" to "DX" | 3 points |

*Equipment multipliers:*

| Equipment | Multiplier |
|---|---|
| MOD TX and RX | 1 |
| OT TX or RX | 2 |
| OT TX and RX | 3 |

*Power multipliers (input to final) —*

***Note Change:***

| | |
|---|---|
| 0-4.9 watts | 4 |
| 5-24.9 watts | 3 |
| 25-100 watts | 2 |
| 100+ watts | 1 |

*Determining total points per QSO:*

1. Find QSO points for the contact.
2. QSO points ***X*** your equipment multiplier ***X*** your power multiplier = total points for the contact.

*Scoring examples:*

1. W2AN contacts W2LV —
   - Both are in "E" zone for 1 QSO point.
   - Both have OT TX and RX for a 3 multiplier.
   - Both are operating at 20 watts for a 3 multiplier.
   - Therefore, 1 point X 3 X 3 = 9 points for the contact.
2. W2BJI contacts W7BCT —
   - "E" to "W" zone contact for 2 QSO points.
   - W2BJI — OT TX and RX with 20 watts.
   - W7BCT — OT RX; MOD TX at 120 watts.
   - W2BJI's points — 2 points X 3 X 3 = 18 points.
   - W7BCT's points — 2 points X 2 X 2 = 8 points.
3. W2AAU contacts W2AN —
   - Both are in the "E" zone for 1 QSO point.
   - W2AAU uses MOD TX and RX for an equipment multiplier of 1; is operating at 120 watts for a power multiplier of 2.
   - W2AAU's points — 1 X 2 X 2 = 2 points.

**Log sheets:** Sheets will be sent to previous entrants. First time entrants should write for log sheets.

**Send logs by April 1 to:** Mike Raide, KF2MW, PO Box 181, Bloomfield, NY 14443.

*"Look, Eddie's fillin' in the log sheet as fast as I can confirm the contacts. I think we can win the AWA contest!"*

*"Do ya really think we gotta chance?"*

# 1929 QSO PARTY

**By Bruce Kelley, W2ICE-AN**

This is a report on last November's 1929 QSO Party without waiting for logs that may be sent late. The reason: to meet the *OTB*'s publishing deadline.

Participation in the party was good considering the final notice that was published in the November 1994 *OTB* was mailed after the event. In fact, there was even some thought of cancelling the party because of this.

The top scorer was Marshall Etter, W2ER, and Bob W2ZM was second. It appeared that Bob was the top scorer until just before presstime when it was determined that W2ER took the top spot.

Bob worked 12 stations using a pair of 45s with selfrectification from a 500 cycle power source. "ZM" was followed by an old pro, W2LYH, with his Hartley and fb homemade receiver.

Party heroes are West Coast members (6th and 7th districts) with OT Hank Brown, W6DJX, racking up an incredible 20 contacts, and who provided many East Coast stations with their first "6" QSO. Hank used a UX-210 Hartley and a 1939 HRO receiver. Another high scorer was W6NVN with his 210s in TPTG. Lastly, a good DX contact for many was Dick, K5RB, with his Hartley and SW-3.

The W2AN mystery: Why does he start each transmission by holding down the key and sending a couple of dots? Answer: He's too lazy to hook up a monitor, so he has to retune his receiver for each transmission to check keying.

**TOP TEN SCORERS**

| Call | #Contacts |
|---|---|
| W2ZM | 41 |
| W2LYH | 33 |
| K3DZ | 29 |
| W2VDI | 27 |
| W2FCH | 24 |
| K5RB | 24 |
| K8BHZ | 24 |
| W2KFG | 23 |
| W1KSK | 20 |
| W6DJX | 20 |

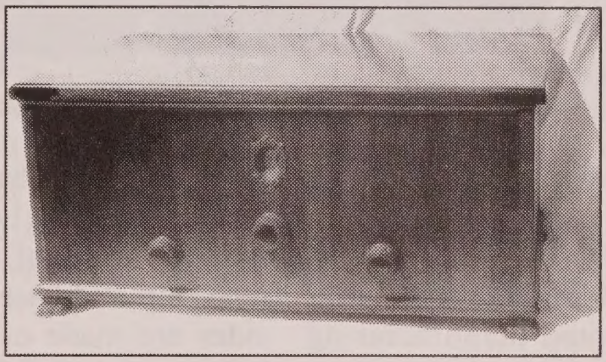
| | | |
|---|---|---|
| W1KSK | 20 | TNT 210 |
| W1FPZ | 10 | TPTG 210s |
| NV1X | 9 | TPTG 245 |
| W1YJ | 9 | TPTG 45s |
| W2ZM | 41 | Hartley |
| W2LYH | 33 | Hartley |
| W2VDI | 27 | Hartley (201A) |
| W2FCH | 24 | Orig. TNT |
| W2KFG | 23 | TPTG |
| W2LP | 19 | TPTG 210 |
| W2AN | 15 | TNT 210 |
| N2EZ | 15 | Hartley 210 |
| KE2O | 10 | TNT (201A) |
| W2HBE | 8 | Hartley |
| AA2CU | 6 | Hartley 245 |
| W2FW | 6 | TPTG 210 |
| WB2AWQ | 5 | Mopa |
| K3DZ | 29 | Hartley, 2 watts |
| WB3HLH | 18 | TNT |
| W3EAN | 14 | Hartley 210 |
| KD3OR | 9 | Hartley 210 |
| K5RB | 24 | Hartley |
| W6DJX | 20 | TNT 210 |
| W6NVN | 16 | TPTG 210 |
| W6TDP | 10 | TNT 210 |
| K6NL | 6 | Hartley |
| W6NLJ | 3 | TNT 210 |
| W7LNG | 10 | |
| W7HQJ | 7 | |
| KC9GQ/7 | 7 | Hartley, 2 watts |
| W7LOG | 5 | TNT 210 |
| K8BHZ | 24 | TNT |
| NI8G | 16 | TPTG 45s |
| WB9K | 8 | TNT 210 |

Receivers — Five stations used homemade sets, two used an SW-3 while the HQ-120 and HRO were the most popular commercial receivers.

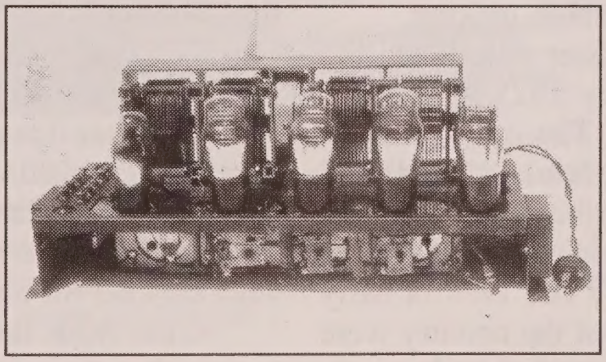
# KOLSTER K23 — RESTORING ANOTHER NEW JERSEY-MADE RADIO

**By Bob Haworth, W2PUA**
112 Tilford Road, Somerdale, NJ 08083

Many readers have heard of Kolster radios — after all, when they went out of business in November 1929 they had just been working their way through a glut of 128,000 unsold sets and had managed to dispose of half the inventory when the bankruptcy notices were posted. That placed a large number of 6-, 7-, and 8-tube sets on the market at bargain prices. I wouldn't be surprised if the attics of many North Jersey citizens contained one or even two of these beauties.



The history of the Kolster is unique. It started with the Federal Telegraph Co. of California and its board chairman, Rudolph Spreckels. The year was 1924 and Spreckels, possessing good business foresight, was convinced that the radio industry was the next great enterprise to turn a profit, a reward second only to the profits made in railroading or oil.



To start with, the company would require a place to manufacture or, better still, someone to manufacture for them. They would provide the design data and the maker would build and test the sets. But — first things first — they would need a well known and respected designer to provide the circuitry. Thus it was that Frederick A. Kolster joined the company.

Kolster had the credentials — he was former chief of the radio rection of the Bureau of Standards and had been responsible for many Navy shipboard designs of wavemeters, the Kolster "decremeter" of spark days, and direction-finding receivers. He was well recognized by the "trade" of the day. He set to work and over the next few years produced 6-, 7-, and 8-tube battery-operated TRF designs using a Kolster-designed variable capacitor with a dial-drum assembly for single-knob tuning (in a day when 2, 3 and 4 dials were commonplace). The photos show this four-gang unit as present on the K23. It is similar in many respects to the HRO-type tuning system except that no gearing is employed; a cable drives the frequency-scale dial.

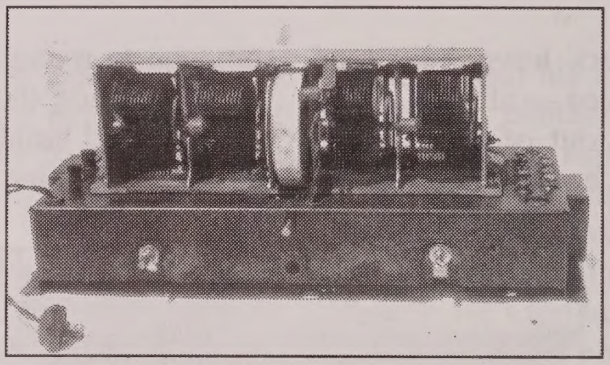
Now the company had stature and designs; all they lacked was a name and a

*Continued on page 24*

*Note: The author is indebted to Alan Douglas and his book Radio Manufacturers of the 1920s, Vol. II, for the historical background of this article.*

*Continued from page 23*

manufacturer to provide the units. The name came easily since they could not use Federal or similar names as these were already registered. They settled on Kolster — that name and the radios they manufactured would guarantee success.



The manufacturer selected for the radios was the Brandes Products Co. of Newark, NJ, the company that made the well known Brandes headphones.

This arrangement did not work well. Perhaps Brandes underbid the contract or decision delays created manufacturing lapses, since it would be very difficult to have main offices in California and a production plant in New Jersey in 1925.

At any rate, the first few production runs were a total disaster and by 1926 Federal absorbed Brandes. This, at least, created a unified chain of management to provide smoother decision making.

At this time, Kolster redesigned the six-tube model and by 1927 production was again humming. The only problem was that apparently Federal had neglected to provide a solid distributor network and sales force for its products, and therefore sales faltered. Also, by late 1927 or early 1928 the urban areas of the country were becoming widely electrified and people who were buying radios did not want to care for batteries, they were demanding "electric" sets.

Kolster, seeing the sales of battery sets decline, redesigned for electric. In October 1927 the company offered its first AC-operated set. From that date the production numbers rose steadily but during 1928-29 the distributorship problems were creating huge inventories of unsold sets, reaching 128,000 at one point. From that point it was all downhill; bankruptcy was declared in November 1929, ending the Kolster name in radio.

The photo shows the author's K23. This radio is labeled as "Manufactured by Brandes Products Corp. for Kolster Radio Corp., Newark, N. J." and defines the radio as a series K23000.

The radio is of the heavyweight class, weighing in at 47 pounds, and has the heavy cast-brass claw feet that appear to be a trademark of Kolster table models. The casework consists of a heavy, three-quarter inch top and base pieces, while the four sides are made of one-quarter inch walnut-faced plywood. A metal frame assembly rigidly holds the sides and secures this assembly to the base. The top hinges to the upper surface of the frame.

The radio uses an untuned RF (antenna) stage (26), three tuned RF stages (26s), detector (27), first audio (26) and final audio (71A). An 80 is the rectifier. The K23 was made before the introduction of the dynamic or low-impedance speaker, hence it requires a high-Z speaker like the RCA 100A. The speaker is AC-coupled to the plate of the audio amplifier where a choke to B+ provides the developed load for audio.

Aside from the Kolster single-knob tuning, the other unique feature of the set is that RF coils (except antenna) are contained in drawn aluminum cans placed under the chassis. These are complete with a header and terminals for connections, while the assemblies are riveted to the chassis framing for rigidity. In all, a well designed tuning system for 1928.

Restoration of the radio was relatively simple: a few bypass capacitors on the RF chassis, together with a few wirewound

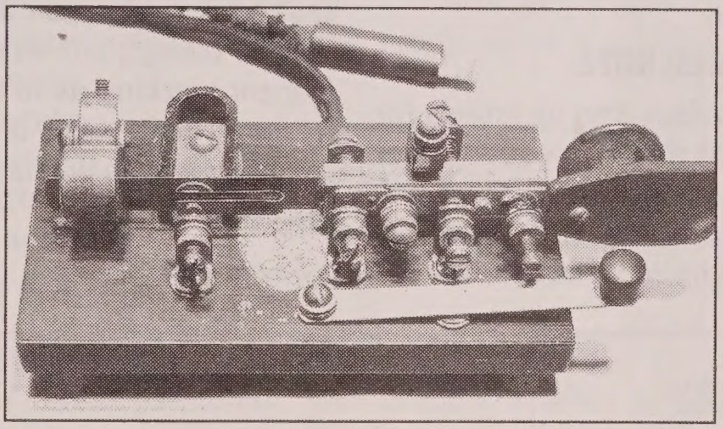
*Continued on page 26*

EDITED BY
Roger W. Reinke
5301 Neville Court, Alexandria, VA 22310-1113
Please include SASE with correspondence.

# THE BUG THAT WAS TOO ATTRACTIVE

A lucky flea market "find" often has a way of generating difficult if answerable questions. The seller usually has little idea of what is being offered, and probably no idea of its origin ("origin" becomes "provenance" if it costs more than $1,000 or so).

That ignorance may be to the knowledgeable buyer's advantage in negotiation, but now it is up the new owner to find out what is actually in hand — here, an odd, semiautomatic key or "bug," obviously made with commercial prospects in mind. Its fancy label notes "Pat. Applied For," but there is no indication that a patent was ever granted. (A search of the patent archives was negative.)



*The label (below) reads : "Peerless Key, Pat. Applied For, Peerless Mfg. Co., Fordson, Mich." [The pendulum arm was removed for the photo.] The photo above shows the Peerless bug. Are there any more out there?*

This bug is not particularly unusual in its design other than the use of a small permanent magnet to attract the steel pendulum to the "rest" position. The piece is unimpressive in its construction, with its ordinary slotted machine screws and simple bent brass sheet metal for pedestals. An exception is the main pendulum support.

The manufacturer did not bother with basics like a stop for the circuit closing lever and a means of locking the pendulum weight. The locknuts are knurled nuts of the style used on dry cells. The cast steel base is nicely finished, however, in a simulated wood grain.

A reasonable assumption is that the patent application was based on the use of the permanent magnet to attract the pendulum quickly the instant it was released. The fact that greater effort would be required in *starting* the pendulum seems to have been lost on the would-be inventor, or at least ignored. There is no particular benefit in transmitting either dots or dashes with such an arrangement, so was the magnet simply a marketing ploy? (The Martin Autoplex, which used a battery, and the Electro-Bug, which drew on the keying circuit, did use electromagnets to generate dots, but not a permanent magnet.) In any event, potential buyers were less than enthusiastic, since there may not be many of these around. Even with its elaborate label and finish, it was unlikely that Vibroplex or any other contemporary makers were much concerned about competition.

### A SOUR NOTE

While the Peerless won no laurels for innovation, at least the prospective buyer had a very good idea of what he or she was getting. The same cannot always be said these days about some rare, mint condition keys being offered for sale or trade. Buyers beware . . . they may be nicely machined replicas but nothing more.

The unwary might be consoled if the item was offered as a replica, but the reports circulating among collectors suggest that there be no mention of the fact of replication. This is not intended to be a lecture on the ethical responsibilities of sellers, but rather to emphasize that knowing as much as one can about the key's manufacture and use, and the reputation of the seller, may save much frustration.

Many collectors prefer to buy equipment "as found," grunge and all, simply because patina and other age indicators are very hard to fake. The keys in question are reported to be early camelbacks, some wireless keys, and the very large spark keys, all of which are eagerly sought. A deliberate effort to mislead is a serious charge, but when there is no permanent marking as to replication and no mention of it, there is no other realistic conclusion as to the intention of the original seller.

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## — KOLSTER K23

Continued from page 23

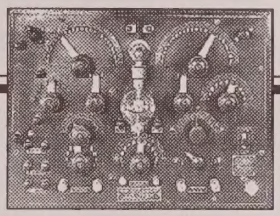
resistors. No capacitors or parts were required on the power-supply chassis. Apparently they used paper oil-filled capacitors which do not usually degrade with time. When the set was activated for the first time after this work, it was found to be very sensitive and selective (as you might guess with all those stages of tuned RF), but even with no antenna connected, I could not reduce the audio level low enough to keep my neighbors and eardrums happy.

Having encountered this problem on other TRF sets when subjected to today's high-power transmitter fields, I found that shielding the RF chassis of the set would be a necessity. Some light-gauge metal air-conditioning duct was formed to shield completely around the chassis, leaving only both ends open to enable antenna and power cable connections to be made.

The shielding cured the problem and the radio is again providing programming as it did 65 years ago . . . proving that basic radio components can always provide pleasure as time marches on.

# EARLY EQUIPMENT PROFILE

**EDITED BY**
Lauren A. Peckham
194 Ormiston Rd., Breesport, NY 14816
Please include SASE with correspondence.



## ORRIN DUNLAP'S LABORATORY PROJECT

In 1993 Bruce Kelley learned that items from Orrin Dunlap's estate were available to the AWA Museum. With help from Dex Deeley, some very interesting equipment from the wireless era was delivered to the Annex. After assigning proper acquisition registration numbers to the items, Bruce asked me to restore an interesting set that Orrin constructed when he was in his late teens.

Many AWA members should remember Mr. Dunlap as the author of many books and articles during the early days of wireless and radio. He died in the late 1960s, having retired some years earlier as vice president of advertizing and publicity for the Radio Corporation of America. An obituary notice traces Mr. Dunlap's radio activities to 1912 when he built his first amateur wireless station.

In 1917 he served as a wireless operator for the Marconi Wireless Telegraph Co. of America, and later as first class radio electrician in the Navy. He was also associated with station NBD in Otter Cliffs, ME. He was the first editor of a radio section for *The New York Times,* starting in 1922. The column provided answers to questions on radio equipment and circuits in terms that individuals with limited knowledge of radio could understand. Remember, these were the days when people from 10 to 70 were building radio receivers of every possible configuration.

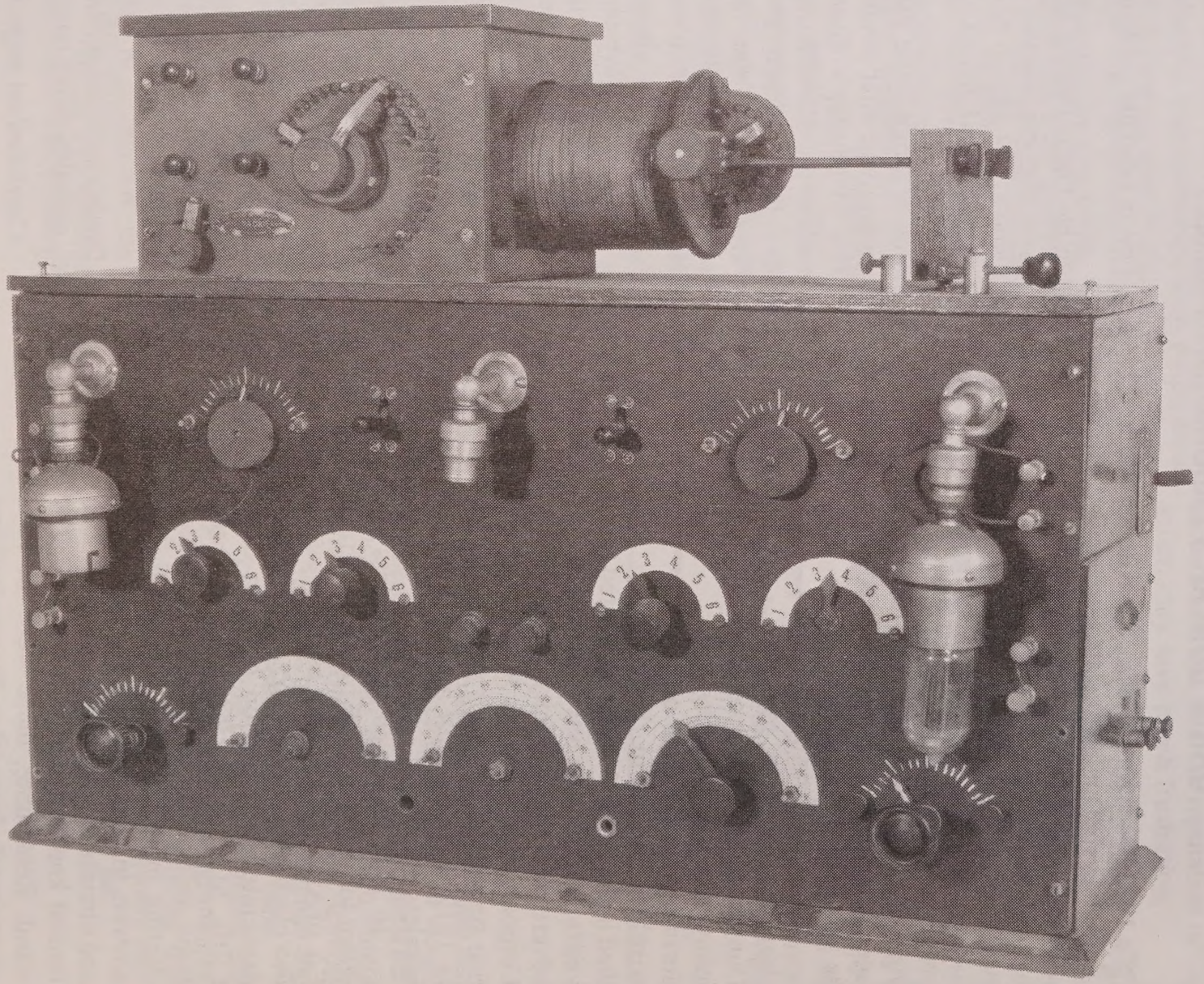
Books written by Orrin Dunlap include a biography of Marconi, *Dunlap's Radio Manual, Radio's 100 Men of Science,* and *Dunlap's Radio and Television Almanac.*

The two photos accompanying this article show the before and after condition of Dunlap's three-audion set. Considering the time period and Orrin's young age, the receiver was well constructed. The before restoration photo shows adapters allowing for the use of Western Electric J tubes which provided an upgrade from the deForest audions used originally. My task was to return the set to "displayable" condition — no cabinet refinishing, and only 1915-1916 vintage replacement parts such as screws and dial pointers. The dial pointers had to be made from scratch, as I couldn't find anything right from my spare parts bin in the attic.

**Before and After Photos, Pages 28 & 29**

The circuit was not easy to trace and I didn't want to disconnect or disturb the original wiring. It became obvious that Dunlap rebuilt this set several times, adding or removing binding posts, graphite potentiometers, etc. An article in *QST* magazine shows Dunlap's station including a two-tube set, probably using parts

*Continued on page 34*

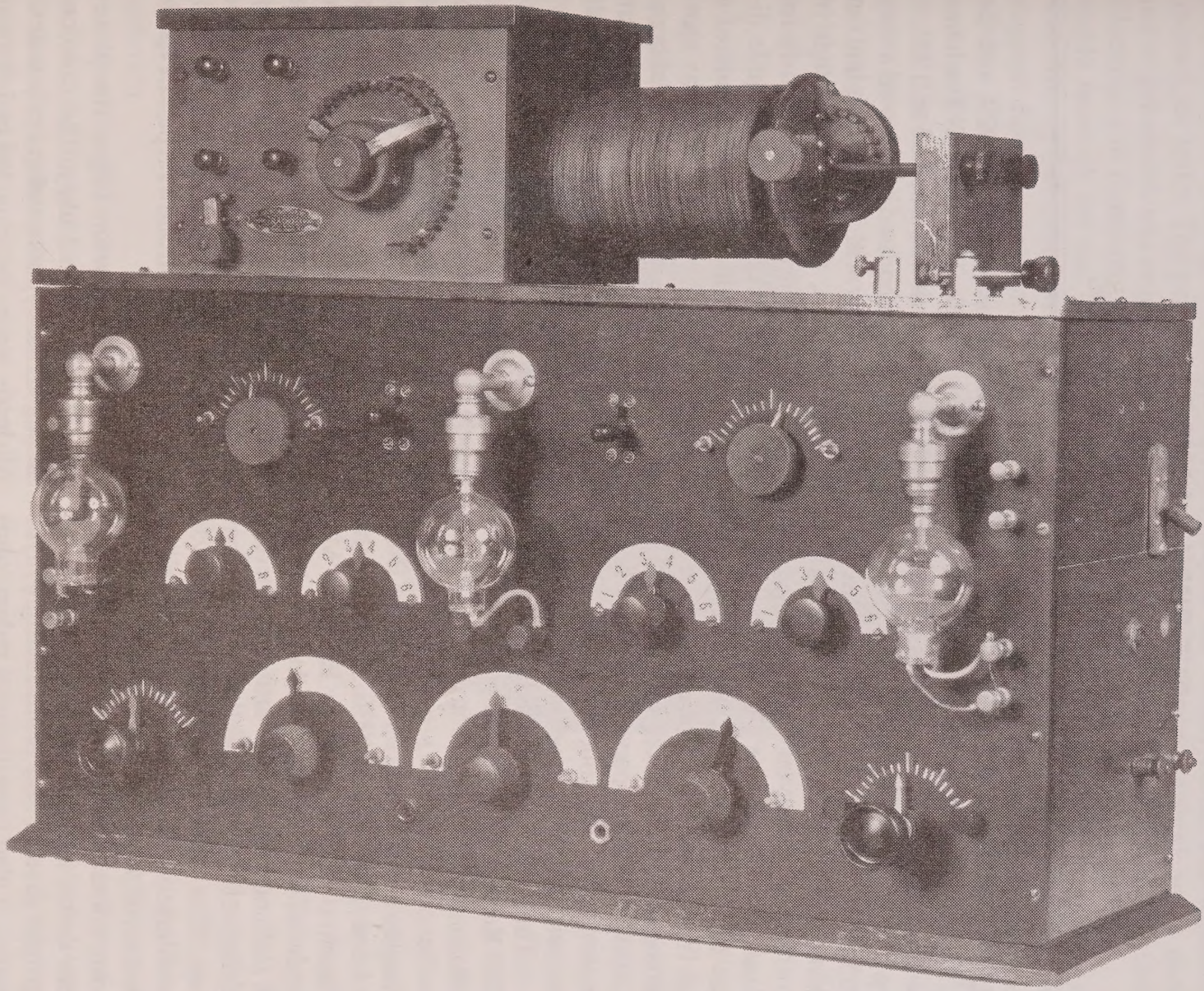


**ORRIN DUNLAP'S HOMEMADE RECEIVER.**

**BEFORE...**

...AND
AFTER.

RESTORED
FOR THE AWA
MUSEUM BY
LAUREN A.
PECKHAM.



# THE BUSH & LANE RADIO

**By Leonard Aquilino, Jr.**
336 Hickok Ave., Syracuse, NY 13206

My beautiful Bush & Lane console was given to me by a fellow collector who furnished every room in his home with impressive examples of early radio. However, this receiver was relegated to a store room.

"Promise me you will give it a good home," was the donor's only stipulation. The radio had not fared well. The original filter condenser bank had been removed, and the speaker was missing. "It is in the cellar in a paper bag somewhere; I never throw anything away," he assured me, referring to the speaker.

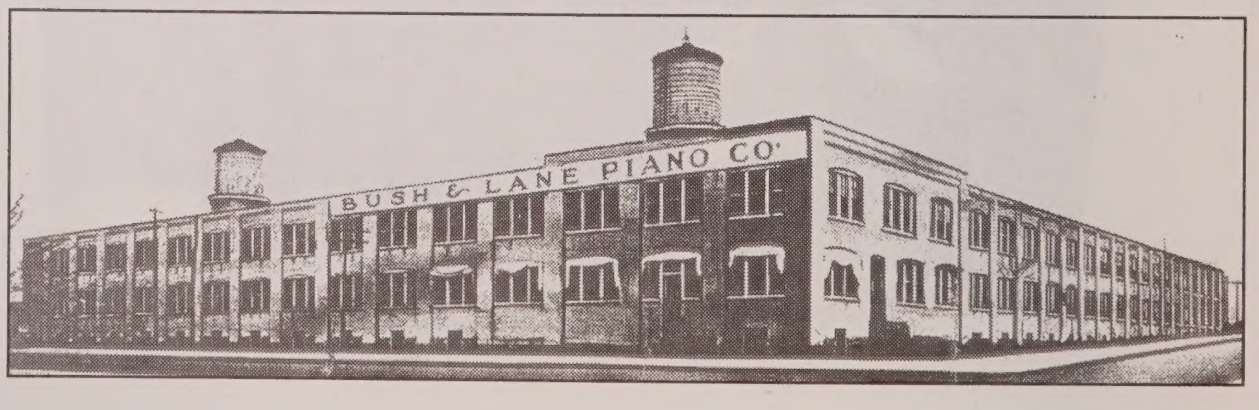
The radio is a Model 12, seven-tube TRF. Research on the company was difficult since little information could be found in the popular books on radio. Ralph Langley's *Set Catalog and Index* lists Bush & Lane from 1926 to 1930. A letter to the chamber of commerce in Holland, MI, produced better results. The Joint Archives of Holland provided an artist's rendering of the factory, and the following information: "The Bush & Lane Piano Co. was established in Holland, MI, in 1901. Production of pianos was started in 1906 with a work force of sixty men. Bush & Lane was noted for its quality grand pianos, upright grands and reproducing player pianos. It also manufactured radios, phonographs, and radio cabinets. Manufacturing ceased in the fall of 1929, and the company filed for bankruptcy." The name of an officer was listed as late as 1931.

My newly acquired set showed a very orderly assembly with neat wiring laid out straight, square, and laced together in bundles. Copper was used generously for shielding. Unfortunately, the ceramic divider-resistor suffered at the hands of a careless repair person. Its end was shattered and tested open. A shiny metal component resembling a large sardine can rested in the center. Fourteen terminals emanated from its sides.

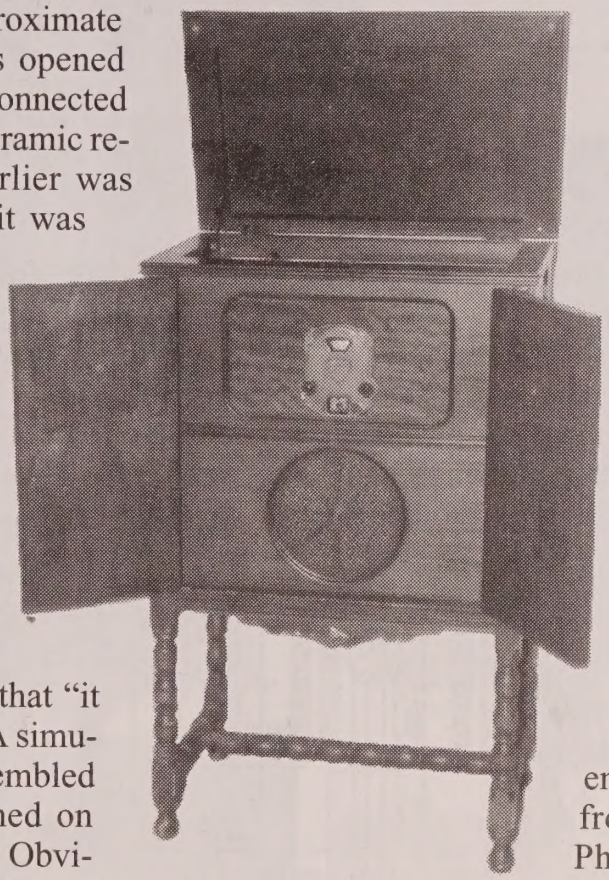
According to a print the box contained ten bypass condensers in a single housing. Was this the industry's first attempt at an integrated circuit? A very large power transformer dominated the top of the chassis, and the unit was finished in gold, characteristic of pianos from that era.

The long-legged cabinet featured a lift top (like a piano) and doors enclosing the front. The dial escutcheon bears the inscription: "Bush & Lane Radio, built like a fine piano." It shows a pair of hands at the keyboard.

When restoration began the power transformer checked okay. The can containing all the bypass condensers was next. All leads were disconnected and the unit tested to 3 with a Sprague Tel-Ohmic As



suspected, everything was either open, shorted, or leaky. The print gave no values so guesswork was required. Steinmetz Electronics in Hammond, IN, did considerable research for me. No service data was found, but employees suggested some approximate values. The can was opened and the new values connected inside. The broken ceramic resistor mentioned earlier was not repairable, and it was bridged at the break.



The receiver was ready for testing, but the speaker was still missing. A year had elapsed, so I called my donor-friend who still could not find it, but who assured me that "it is here somewhere." A simulated set-up was assembled and the set was turned on and it sounded good. Obviously, the bypass values were correct. To find the values for the power supply filters, various sizes were substituted until a minimum hum was heard in the speaker. Three 10mf/450v units proved optimum.

Now the filter condenser box could be built. Again, guesswork was required so that the replacement would complement the existing components. A sheet metal box was formed in three sections, soldered together, and the three 10mf electrolytics placed inside. Matching the original gold paint seemed easy at first, but several spray cans tried were not even close. An automobile color chart was consulted, and the correct formula specially mixed.

Another year had passed, so I tried my friend again. "Yes, I found it. Come on over!" I was out the door in an instant, despite the winter storm that otherwise would have made me think twice about leaving the house. But radio stuff — that's different!

The speaker was not ready for use. Its cone, though intact, floated helplessly on the spider and delicate voice coil wires. The leather support ring had long ago dried and crumbled. Three of the four phone tips were missing from the seriously frayed cable. Nevertheless, I was thankful to get the original speaker, and even more thankful later to learn all internal windings were okay. New cable was fabricated and enclosed in a loom made from woven shoe lace. Phone tips were duplicated on a lathe. The support ring was fashioned from chamois. The repaired unit sounded remarkably good.

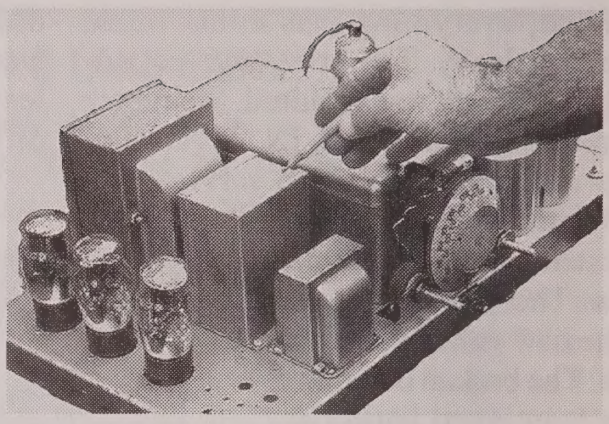
A final check of voltages turned up a surprise. Plate voltages exceeded what I thought safe for an old set — 350 volts on the last stage of audio where the print called for 230. This was corrected with the installation of a line dropping resistor.

Several reasons for this condition are offered:

1) Modern electrolytic condensers have negligible leakage compared to those of the 1920s. Thus, available voltage would be greater at the power supply.

2) Years ago, measurements were commonly made with a 1,000 ohm/v meter. Present readings were done 20,000 ohm/v multimeter.

*Continued on page 32*



*The Bush & Lane chassis with the author's home-made replacement filter condenser box.*

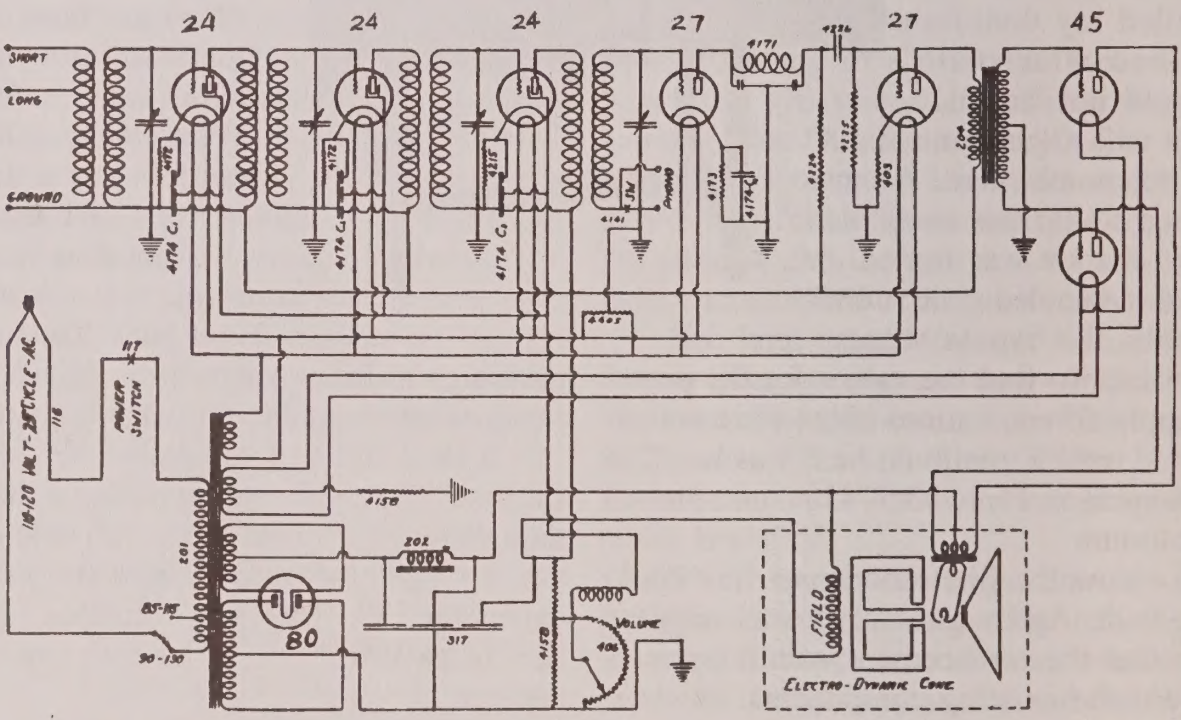
## — BUSH & LANE RADIO

*Continued from page 31*

3) The print lists line voltage at 112 volts. Today's is 117 volts.

4) The power transformer is rated at 25 cycles. Two differing schools of thought exist here. One group claims it makes no difference if a 25 cycle transformer Is operated on 60 cycles. The other group says there is a difference. I favor the latter theory.

I would like to hear from anyone who has had first-hand experience with 25-cycle transformers. I would also like to correspond with readers who have a Bush & Lane radio.

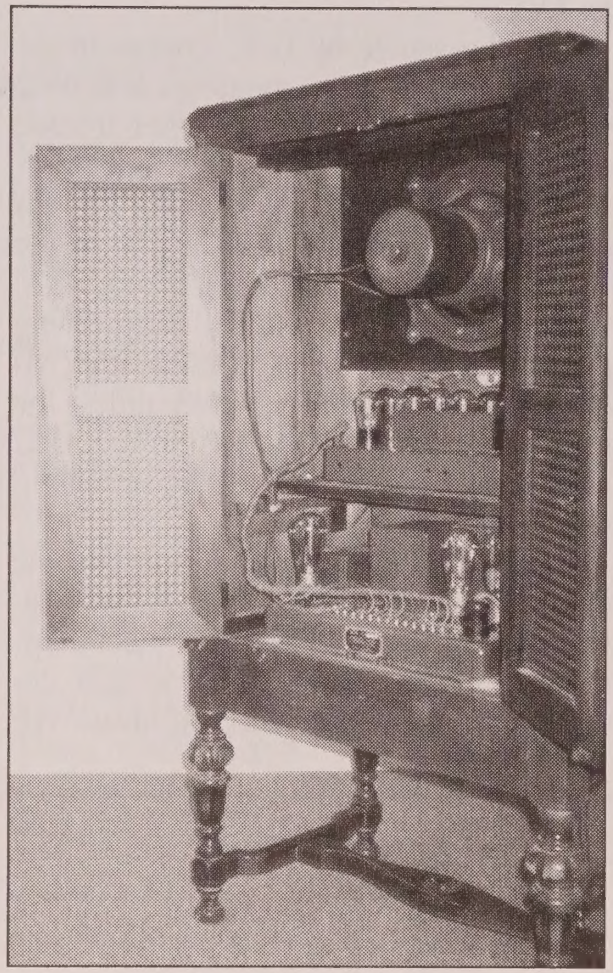



**No. 12 Screen Grid**

*4174 — Ten-Section By-Pass Condenser, C1, C2, C3, C4.*
*4173 — 10,000 Ohm Detector Bias Resistor.*
*4215 — 5,000 Ohm RF Bias Resistor, R1, R2, or R3.*
*4172 — 3,000 Ohm RF Bias Resistor, R1, R2, or R3.*
*4175 — 1,500 Ohm RF Bias Resistor, R1, R2, or R3.*
*4405 — 20 Ohm Cenmter-Tapped Hum Balance Resistor.*
*4158 — Voltage Divider Resistor, 5,750 Ohms Total.*
*406 — 10,000 Ohm Volume Control.*
*317 — Electrolytic Filter Condenser Assembly.*

# RCA's RADIOLA 64 CONSOLE REVISITED

**By Harley Perkins**
PO Box 10, Grafton, VT 05146



The August 1987 issue of *OTB* had an article about RCA's Radiola 64 which gave the schematic diagram and some comments on the authors', Dick Ransley and Bob Allen, reaction to the set. I would like to offer a few more comments on this remarkable radio receiver model.

The authors mentioned that the set has a tuning meter. The meter is in series with the B+ plate voltage supply lead to all of the RF and IF amplifier stages. Its operation depends upon an automatic volume control circuit or AVC. The tuning meter is the same as the well known S meter in most communication receivers, so what's the big deal? Keep in mind that this set hit the market in the Fall of 1928 and predates most of the commercially available

*Continued on page 34*

**ABOUT THE AUTHOR** — In his own words: "I have enjoyed the *OTB* ever since I first heard about it from one of the charter members of The Northwest Vintage Radio Society I helped to start in Portland, OR, about 20 years ago. I began collecting every radio I could get at about age 11 when my fascination for things electronic blossomed into becoming a ham, a commercial radio operator, an R&D engineer and a university E.E. prof. Now that I am retired, I decided to take time to try writing this article above based on a radio collecting hobby I continue to enjoy."

## — RCA's RADIOLA 64

*Continued from page 33*

communication receivers by a few years. It also seems to have predated competing broadcast sets by a year or so in offering an AVC.

In the article by D.K. Owens in the August 1994 *OTB* he mentions that AVC became a standard feature after tetrode and pentode amplifier tubes became available. But the Radiola 64 uses the 227 for all of its amplifiers except a 250 in the output audio stage. Accomplishing AVC with triodes was a tougher engineering problem because the stage gain with a triode does not change very much unless the grid bias is changed a lot. So an AVC amplifier was used somewhat similar to Owens' fig. 14.

Another innovation that later became common was the use of a power grid detector or infinite impedance detector instead of the then-standard grid leak detector which needed an additional AF amplifier stage to get sufficient drive for the output stage. Admittedly the AVC action is not sensational but this is a very smoothly operating receiver without being blasted out of your chair as you tune across the band or listen to a far away station whose signal is fading at times.

The attractive cabinet has front doors that fold around to the sides out of the way and back doors with caning to provide ample ventilation.This is a very fine collectable and useable radio if the size and weight are not too daunting.

The first of the two 64s I've owned was given to me in 1946 when I was a teenager by a school teacher who knew of my hobby in radio electronics and my plans to become an electrical engineer. It had no cabinet and I never found another for it. Eeventually its mighty power supply powered a ham transmitter. The second set, acquired about 25 years ago, is complete and beautiful, and I continue to enjoy it. A poor connection in the internal input AF transformer was repaired.

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## — DUNLAP'S RECEIVER

*Continued from page 27*

that eventually went into the three-tube one. Sorting through the wiring as best I could produced a schematic almost like one illustrated by Paul Godley in the August 1916 issue of *QST.* Various switches and binding posts allowed for all sorts of tuning configuations. Strangely, nothing about the wiring would suggest that this particular set was regenerative. However, I could have missed something in the maze of cotton-covered bell wire.

Looking at the front panel, the center audion is the detector, left is first audio, right is second audio amplifier. A three-position, telephone-type switch allows the set to operatewith detector only, detector + one audio amplifier, or detector and both audio stages. Each tube has separate binding posts for filament and plate supply batteries.

Here is a "bill of materials" listing many of the parts Orrin must have ordered from 1915-1916 catalogs and magazines:

| | |
|---|---|
| • Receiving transformer, (1), Radio Apparatus Co. | $18.00 |
| • Tuning condenser, (2), Haller Cunningham Electric Co. | 10.00 |
| • Knobs, dials, hardware | 3.75 |
| • Audion bulb, (1), S-grade | 4.00 |
| • Audion bulb, (2), amp. grade | 15.00 |
| • Rheostats, (3), porcelain | 3.60 |
| • Potentiometers, (3), graphite | 6.00 |

I wanted to fire up the set, but was discouraged by many cold solder joints and shorted condenser plates. This receiver is now on display in Armstrong Hall at the AWA Electronic Communication Museum in Bloomfield, NY.

# RECENT RADIO, TV AND ENTERTAINER OBITUARIES

**Charles S. Griffen, W1GYR**
1225 New Britain Avenue, West Hartford, CT 06110-2405 (203) 232-8515

## William Gundry Broughton

William Gundry Broughton of Schenectady, died at Ellis Hospital on July 30, 1994, after a short illness. He was born in Fort Wayne, IN, on Jan. 12, 1902, son of Henry Primm and Jane Goldsmith (Tinkham) Broughton.

After graduating from Cornell University in 1924 with a bachelor's degree in electrical engineering, he was employed by General Electric Co. in a number of engineering assignments, including aircraft radio design and flight testing for the Navy. Afterwards he specialized in communications products. Mr. Broughton retired from GE in 1965 as a district sales manager in the electronics division, often making calls on customers and delivering emergency parts in his own airplane.

After retiring, Mr. Broughton received a juris doctorate degree in 1968 from the New England School of Law where he was an editor of the law journal *Portia*. In 1972 he received a master's degree in communications from Murray State University in Murray, KY.

For 30 years, many Schenectady organizations benefited from Mr. Broughton's philanthropies. In addition he established a number of endowed funds. In 1990 Mr. Broughton ceased

*Continued on page 59*

Prepared by James W. Pontius, W2CPB, executor of the William Gundry Broughton estate and president of the William Gundry Broughton Charitable Private Foundation, Inc., Schenectady, NY

• **ROY ALLEN,** 74, CBS-TV executive. He was one of the first black television producers and directors. In his 30 years at CBS-TV in New York, he worked with Dick Van Dyke, Dom DeLuise, Carol Burnett and other stars on variety shows, soap operas and presidential campaigns. He produced and directed *The Garry Moore Show, The Way to Go, Black Heritage,* and *Sunrise Semester.*

• **JAMES T. AUBREY, Jr.,** 75, television executive. The former president of the CBS Television Network was responsible for a succession of rural-based comedies, including *The Beverly Hillbillies* and *Green Acres.* He left CBS in 1965 to produce for television in Hollywood.

• **CHARLES F. BAKER,** 89, W8CB, ex-U50X and W9VN, founder and president emeritus of Grace Bible College and pioneer radio operator. He was chief operator of WFAA for the first broadcast linking a number of radio stations together by land lines to form a network. The occasion was the broadcast of a speech by President Coolidge to Congress on Dec. 6, 1923. (See "A Famous First . . ." on page 19 of the December 1983 issue of *OTB.*

• **JOHN LORD BOOTH,** 87, media pioneer. He began purchasing radio stations in the early 1930s and continued until after World War II. He constructed WJLB-FM in Detroit, one of the first FM

stations. During the 1950s he was briefly involved with UHF-TV. Later he built cable television systems in Michigan and Virginia.

• **SEYMOUR (Bud) BREES,** 73, big-band singer and radio disc jockey. He sang with many groups including the Art Mooney Band and was heard on WPEN-AM in Philadelphia from 1951 to 1962. After retiring in 1980 he returned to the station with a Sunday nostalgia record show which continued until 1987 when the stations format changed. His biggest recording hit was *Four Leaf Clover* which sold more than 4 million copies.

• **CABELL (Cab) CALLOWAY,** 86, band leader, singer, author and dancer. His band leading career began with The Alabamians in 1928 which was later merged with The Missourians. Later, the group was known as Cab Calloway and His Orchestra and continued in popularity until the late 1940s. In 1931 he recorded *Minnie the Moocher* which made him a national name as a novelty scat singer, nicknamed The Hi-De-Ho Man. In 1953 he appeared on Broadway as the drug-peddling Sportin' Life in *Porgy and Bess.* Film credits include T*he Big Broadcast of 1932, The Singing Kid* with Al Jolson in 1936 and *Stormy Weather* with Lena Horne in 1943. He compiled the *Hipsters Dictionary* which was updated several times.

• **RON COCHRAN,** 81, retired TV network anchor and radio newscaster. He began his broadcast career in radio in 1935. In 1950 he began anchoring the early and late evening news at CBS affiliate WTOP Washington. From there he went to ABC, where he hosted *The ABC Evening News* with Ron Cochran. He left ABC in 1965 and formed Ron Cochran Enterprises, which produced radio and television programs.

• **HECTOR DAVIS III,** 61, supervisory electronics engineer, FCC Laboratory. He was associated with the laboratory for 30 years and played a key role in developing transmission standards for NTSC color television and HDTV. He was an expert in TV interference.

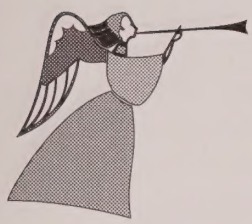
• **JACK DILLE, Jr.,** 80, broadcasting executive, owner and editor of *The Elkhart Truth.* He was chairman of the board of both Truth Publishing Co. and Pathfinder Communications Corp., which publishes newspapers and operates 11 radio stations in Indiana, Michigan, Ohio, Oklahoma and Mississippi.

• **CHARLES DRAKE,** 76, actor. He began acting in the late 1930s and had three roles in *The Hunchback of Notre Dame* starring Charles Laughton. His co-stars in movies included Bette Davis, Joan Crawford, Humphrey Bogart and James Stewart. In the 1940s and 1950s he appeared in *Dive Bomber, The Maltese Falcon, The Man Who Came to Dinner, You Came Along, The Glenn Miller Story,* etc.

• **ALLEN S. FEUER,** 65, retired president and general manager of KTUL-TV in Tulsa, OK. Earlier he was vice president and general manager of WEYI-TV in Saginaw, MI, WROC-TV in Rochester, NY, WQTV in Boston and KLRT-TV in Little Rock, AR.

• **BERNARD (Cliff) GARDNER,** 88, electrical engineer. He helped develop the first television picture tube and is credited with making the first glass vacuum tubes. Mr. Gardner held 28 patents for electron tube devices. He was a first assistant to his brother-in-law, Philo T. Farnsworth, who invented electronic television.

• **FRED GOERNER,** 69, broadcaster. He was one of television's earliest news anchors and an award-winning broadcaster and author. In the 1950s he began anchoring at KUTV in Salt Lake City. He joined KCBS radio in San Francisco in 1958. His 1966



book, *The Search for Amelia Earhart,* made *The New York Times* best seller list.

• **JOHN C. GRAHAM,** 71, design director, NBC. He created the NBC peacock, which was the original graphic representation used when NBC introduced color television in the 1950s. His entire career was involved with NBC's advertising and promotion department.

• **MITCHELL HASTINGS,** 84, FM pioneer and engineer. He was the co-developer of the first FM car radio and founded the Concert Network in 1955. The network included radio stations in New York, Hartford, CT, Providence, RI, and Boston. He was also the cofounder of the National Association of FM Broadcasters and president of the Major Armstrong Memorial Research Foundation at Columbia University.

• **JEAN GANNETT HAWLEY,** 70, publisher and chairman of Guy Gannett Communications. She became president of the firm in 1954 after the death of her father. During her tenure the company expanded and diversified to become a multimedia communications company with operations in seven states, including TV stations and broadcast towers.

*1926 Advertisement*

• **VIR N. JAMES,** 85, owner/engineer of Vir James Consulting Radio Engineers, Denver. A lifetime broadcaster, first working for KGCI-FM in Grundy Center, IA, then moving to CBS. In the 1940s and 1950s he founded radio stations KVRH-AM & FM and KLVC-AM in Salida, CO. He authored several professional papers and publications. One paper, "Radio Frequency Measurements" was published in the *NAB Engineering Handbook.*

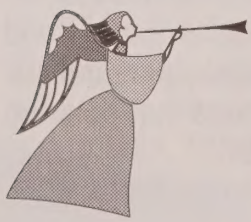
• **BERT KNAPP,** 76, retired radio news broadcaster. During his 40 year career with WMCA-AM in New York he was heard on programs that ran the gamut from big band music to rock 'n' roll, to sports, and eventually, to news.

• **BURT LANCASTER,** 80, actor and producer. He appeared in more than 70 movies beginning with *The Killers* in 1946 and ending with *Separate But Equal* in 1991. In 1960 he won a best actor Oscar for his performance in *Elmer Gantry.* Other memorable credits include *From Here to Eternity, Judgment at Nuremberg, Sweet Smell of Success, Birdman of Alcatraz, The Swimmer, Field of Dreams,* etc. He received a second Oscar as producer of *Marty.* The film was produced by his company, Hecht-Lancaster, in which he was partnered with his agent, Harold Hecht.

• **WILLIAM A. LEONARD,** 78, W2SKE, CBS News broadcaster and executive. He was hired by CBS in 1945 to work at WABC (later WCBS) in New York City to anchor a program that became *This is New York* on radio, and later *Eye on New York* on television. The series, which ran for 15 years, was one of the forerunners of today's electronic magazine format. He was a key figure in the creation of new documentary forms from 1965 to 1972 — *60 Minutes, Magazine, 30 Minutes,* and *Sunday Morning.* He became president of CBS News in 1979 and held that position until his retirement in 1982.

• **LESTER W. LINDOW,** 81, broadcaster and former head of the Association of Maximum Service Telecasters (now the Association for Maximum Service Television). He began his broadcasting career in 1935 as a salesman for WCAE-AM in Pittsburgh. In 1940 he became station manager of WFBM-AM in Indianapolis. During World War II, he was executive officer, and later chief, of the radio branch of the War Department's Bureau of Public Relations. Later he served as general manager of stations in Indianapolis, Rochester, NY, and Flint, MI, before joining the newly created AMST in 1957 as the association's first executive director. The organization was formed to hold at par the number of licenses available for broadcast use and to guard the quality of the TV signal each licensee originated. One of AMST's — and Lindow's — biggest victories came in 1962 when President Kennedy signed the all-channel television receiver bill which required sets to be able to receive UHF as well as VHF. This led to a boom in the value and profitability of UHF outlets. He retired as president of the association in 1978 and then served as member of the board and executive committee of Radio Free Europe/Radio Liberty from 1978 to 1982.

• **JOHN H. MULLANEY,** 73, consultant, engineer and lieutenant colonel in the Air Force. During his career he formed a consulting firm, John H. Mullaney & Associates, and Multronics, which manufactured phasing equipment for AM radio stations. He supervised the design and construction of the first airborne high-power TV, AM, FM and LF transmitting planes that were used in Vietnam. He also oversaw the construction of the world's largest satellite tracking station for the U.S. Navy. Four engineering patents on antennas or antenna systems were awarded to him.



• **HARRIET NELSON,** 85, actress. For 14 years (1952-1966) she appeared with her husband and two sons in the television series *The Adventures of Ozzie and Harriet.* The show began on radio in 1944. In 1949 their sons, David and Ricky, joined the program. She also starred in the short-lived series *Ozzie's Girls* in 1973. In recent years she occasionally appeared on *The Father Dowling Mysteries.*

• **MOSCHE PARANOV,** 98, administrator, educator, conductor and pianist. He co-founded the Hartt School of Music at the University of Hartford in 1920 and was its head for 51 years. In the 1930s he was musical director of WTIC-AM, a post he held for more than a decade. He led the station's orchestras in hundreds of symphonic and pops programs, many of which were broadcast over national radio networks. He conducted the Hartford Symphony Orchestra, Connecticut Opera Company, and the Hartford Ballet. Mr. Paranov was a central figure in the musical life of the Hartford region for more than 75 years.

• **MARTHA RAYE,** 78, singer/slapstick comedian of stage, screen and television. She achieved stardom in the 1930s in a Bing Crosby musical, *Rhythm on the Range,* in which she stopped the show with her full-throated rendition of "Mr. Paganini." Her most notable role came in 1947's *Monsieur Verdoux* in which she played the indestructible mate of wife-killer Charlie Chaplin. Other film credits include *Hideaway Girl, The Big Broadcast of 1937, College Holiday, Waikiki Wedding,* etc. In the early days of TV she was a guest on Milton Berle's *Texaco Star Theater,* and had her own variety series, *The Martha Raye Show,* in 1955-1956 on NBC.

• **GILBERT ROLAND,** 88, actor. His career spanned seven decades from silent films to television and included 11 pictures as the legendary Cisco Kid. He appeared in more than 100 films. Of these, he received the greatest critical praise for his role as the matador in *The Bullfighter and the Lady* in 1951.

• **DICK SARGENT,** 64, actor. He is best known for his role as Darrin Stephens on the TV series *Bewitched.* He starred in that role from 1969-1972. Other TV credits include *Gunsmoke, Playhouse 90, Family Ties,* etc. Film appearances include *Prisoner of War, Bernadine,* and *A Touch of Mink.*

• **MILTON JERROLD SHAPP,** 82, former governor of Pennsylvania and cable television pioneer. He founded Jerrold Electronics Corp. in Philadelphia in 1948 with an investment of $500. The firm equipped the world's first cable-television system in the communities of Lansford and Mahanoy City, and became the world's largest supplier of cable TV equipment. Mr. Shapp is credited as the father of cable TV for his work in popularizing the technology. In 1966, when he first ran for governor and lost, he sold his cable-TV interests for $14 million.

• **GORDON SHERMAN,** 80, broadcasting and cable pioneer. He began is career as a radio engineer in St. Louis. In 1950 he built and operated WMAY Radio. During his lifetime he owned Florida radio stations in Fort Lauderdale, Melbourne, Orlando and Daytona, and in Madison, WI. In 1964 he built the first cable system in Jacksonville, IL. Sherman later owned cable systems in Indiana, and in Hollywood and Palm Beach County, both in Florida. He became a member of the Cable TV Pioneers in 1993.

• **JULE STYNE,** 88, composer. He wrote 1,500 songs during a seven-decade career that continued into the 1990s. Of these nearly 50 were at the top of the Hit Parade during the World War II era and beyond. Among them were *I Don't Want To Walk Without You Baby, Make Someone Happy, I'll Walk Alone, It's Been a Long, Long Time, I Guess I'll Hang my Tears Out to Dry, I Fall in Love Too Easily, It's Magic,* etc. He gave Barbara Streisand and Carol Channing their signature songs, *People* and *Diamonds Are a Girl's Best Friend* respectively.

• **JESSICA TANDY,** 85, actress. Her acting career spanned more than 60 years, and included stage appearances in New York and London, motion pictures and television. At age 80 she won an Academy Award for her portrayal of a spirited southern matriarch in *Driving Miss Daisy.* Other film credits include *The Seventh Cross* (1944), *Forever Amber,* (1947), Walt Disney's *Light in the Forest* (1958), Alfred Hitchcock's *The Birds* (1963), etc. She played the original Blanche DuBois in Tennessee Williams' Broadway production of *A Streetcar Named Desire* (1947). She received four Tony Awards, Broadway's highest honor.

• **G. EDWARD WALLIS,** 78, former vice chairman of Westinghouse's Group W, Pittsburgh. He joined Group W in 1934 and held a number of field management positions before joining KDKA-TV in Pittsburgh. He retired in 1980.

Information for this column was obtained from *Broadcasting and Cable, The Encyclopedia of Jazz, The Hartford Courant, The New York Times, QST, San Antonio Express-News* and *Variety.*

Thanks to H. Paul Bohlander, W3VVS; F. Krantz; Dennis F. Moore; H. David Prace, WB21UM; and Robert G. Thomas, W3QZO for additional source material.

## SILENT KEY

T. Mitchell Hastings, Jr., of Edgartown, MA, president of the Armstrong Memorial Research Foundation.

## — AWA NEWS

*Continued from page 5*

rates if booked before Feb. 4. Call Holiday Inn, (317) 783-7751. Luncheon available. Contest: Your favorite table radio, incl. transistors. Info: Dr. Mike Clark (317) 738-4649 or Alex Whitaker (317) 535-4174.

### SPRING FEVER '95

March 25, Washington, PA, Fairgrounds

Time: 7 a.m.-5 p.m. Entry fee: $2; seller $15 (includes enrty). Traders market all day, auction at 1:30. RV hookups; 500 vendors; new, larger building; unlimited parking. Meet sponsored by Pittsburgh Antique Radio Society, Mid-Atlantic Antique Radio Club, Mueum of Radio & Technology, West Virginia Chapter-AWA, Niagara Frontier Wireless Association (NFWA), and Buckeye Antique Radio & Phonograph Club. Info: Spring Fever 3, 4204 Thorn Apple Lane, Charleston, WV 25313.

### NORTHLAND'S RADIO DAZE

Friday-Saturday, May 19-20

Northland Antique Radio Club (NARC), in conjunction with AWA and Pavek Museum of Broadcasting, announce Radio Daze '95 at Hotel SeVille, Bloomington, MN. Two-day swap meet; visit to Pavek museum; auction Friday evening; antique radio contest; presentation by Rochester, MN, Radio Theater Guild, famous for re-enactments of old radio programs such as *The Shadow, Fibber McGee and Molly.* Info on registration: NARC, Box 18362, Minneapolis, MN 55418 (include No. 10 SASE).

### NEW YORK-SPRING MEET

Saturday, May 6

Local AWA meet/dinner/sale at AWA Annex, and American Legion Hall, Rts. 5 & 20, Bloomfield, NY, 2 miles east of AWA Museum. 9 a.m.-noon: flea market; 10:30 a.m. at Annex: auction of misc. equip. (receivers, speakers, amplifiers, detrius); noon: buffet ($7, incl. auction card); 1 p.m.: auction of members' equipment, direct sale, $1 auction card required. Dinner reservations a must before May 3; none at door. Info (send no money): Bruce Kelley, 59 Main St., Bloomfield, NY 14469, (716) 657-7489 or Lauren Peckham, Box E, Breesport, NY 14816, (607) 739-5443.

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## — BROUGHTON OBITUARY

*Continued from page 54*

his long standing practice of supporting local organizations with substantial gifts and established the William Gundry Broughton Charitable Private Foundation, Inc. to operate in perpetuity for the purpose of making donations to charitable, religious, literary, scientific, and educational organizations after his death.

Mr. Broughton had an enduring interest in amateur radio, having been licensed as W21R for more than 70 years. He was president of the Schenectady Amateur Radio Association for one term and donated funds to that organization many years ago to provide for the continuing annual Broughton Memorial Award to a local amateur radio operator for exemplary service to amateur radio, to the public, and to the association in honor of his father, Henry Primm Broughton, licensed as K2AE.

Some years ago William Broughton donated to the Schenectady Museum & Planetarium the amateur radio station presently operated there by the Schenectady Museum Amateur Radio Association.

Although Mr. Broughton never owned an automobile and never had a telephone, he always drove the best motorcycle available.

# CLASSIFIED ADS

## OLD TIME ODDS & ENDS

Capacitor rebuilding — Twist-Locs, old wet or dry can types, Collins Linear .15mfd @ 5.6KV., etc. All rebuilds guaranteed 1 year. Everett Hoard, N0NVQ, Box 218, Lher, ND, 58460 (701) 378-2341.

Morse Operators: Repros of Bunnell "Acme" resonator, pedestals are black, hoods (drilled for main line or local sounder) available in wine red, gray, WU green or natural (varnished). Felt base, 4 ft. cord. $45 includes UPS (no CODs). Jack Proefrock, K6QEQ, 20814 S. Hawaiian Ave., Lakewood, CA 90715/TDC

## SELL — BROADCAST

Fada #652 — Yellow/orange, no cracks, original knobs and back, plays, $450 or will trade for Buffalo, NY,- built broadcast receivers by Aragain, Branston, Federal, Larkin, USL, Promenette, Wurlitzer, etc. Let's make a deal! Joe Pawell, 6 Augustine Ave., Ardsley, NY 10502 (914) 693-9374.

Trade an Atwater Kent Model 10 for a National NC-400 Tom Rousseau, 23995 SW Drake Lane, Hillsboro, OR 97123 (503) 642-3679.

Hallicrafters Model SX101, $250; Hallicrafters HT37 transmitter, $200; These items on pickup, cash and carry. Carrier-operated loudspeaker control panel, (see pg. 53, Nov. 1994 *OTB*), $30 plus UPS. Frank Krantz, 100 Osage Ave., Somerdale, NJ 08083.

Hammarlund Super Pro with power supply, Serial No. 1, a rarity and in excellent working condition, $500 plus shipping. J. Cadrecha, 292 S. Prospect St., Burlington, VT 05401 (802) 862-8282 after 5 p.m. EST.

Hammarlund HQ-170C, 160 thru 6 meters, triple conversion ham receiver, nice, $400; Ameco "Code Practice Oscillator" CPS, $50; Hallicrafters SP-44 Panormaic Adaptor w/manual & Century 400 power supply, $300; Peerless Signagraph paper tape code machine w/3 tapes, $200; Hallicrafters S-39 (Military S-29), $250; Knight StarRoamer, 5-band, regenerative, $75; Hallicrafters S-20R, works fine, repainted, $100. All plus UPS. Chuck Bray, 1322 Ivy Rd., Bremerton, WA 98310 (206) 393-1013.

## SELL — GENERAL

Atwater Kent cabinet by Keil of Milwaukee (Model 55 or 60). Made 1929. Cabinet only, no radio. Completely restored and refinished. Excellent condition, ready for your radio and speaker. Asking $200 or best offer plus shipping and packing or you pick up. Bill Gresham, 2711 Wells St., Fort Wayne, IN 46808 Tel. (219) 483-6092. Leave message, will return all calls.

Broadcast plate, filament transformers, chokes, mechanical remote control cables, with control heads - 25 feet long, Freshman Masterpiece, Hallicrafters S-53A, McMartin LT252B, Roberts 990, Scott 296, National NC-300 with speaker. Francis Yonker, W2IBH, 1229 Inverary Place, State College, PA 16801 (814) 867-1400.

Cabinet for Kolster Model K-20, complete with claw feet and dial escutcheon, solid but could use refinishing, $35 plus shipping. Nick Viania, 54 Neutral Ave., Staten Island, NY 10306.

Cathode ray rube — rare RCA-913, 1-inch diameter screen, metal shell, octal base, unused, fil. 6.3 volts, anode 500 volts, sensitivity 200 DCV/inch. Full specs available. $95. Lawrence Friedman, 578 Alpha Rd., Grahamsville, NY 12740 (914) 985-7765

Crosley clock radio F25BK in good working cond. (1950s), $25; GE portable radio (2 volt lead acid battery) Model 250, (1946 — see FOS pg. 93) in exc. cond. $50; GE pushbutton AM radio model L-650 (1940s), exc., in working cond., $40; Stewart Warner AM/Shortwave radio, Model 51T46 (1940s) with Bakelite case in exc. cond., $40; Philco Model 40-150 AM/Shortwave pushbutton table radio (FOS pg. 127), good cond., $50; Philco Transitone Model 42-PT91 loctaltube AM radio (FOS pg. 132), exc. cond, dirty, $40 Bill Hurni, W3HWT, 329 Evergreen, North Wales, PA 19454 (215) 699-5787.

DeForest-Crosley Grandfather clock, Burns Dragonfly, Northern Electric R11/15, Radiola VIII, Westinghouse 53, Marconi M-2 with matching speaker. A.R. Nolf, 539 Kastelic Place, Burlington, Ontario, Canada L7N 3S9 (905) 333-4557.

DeForest D-10 Reflex, missing top mounted coil, $325; Philco 39-4, Working , $35; Philco 610, 3 band,

working, $75; Philco 37-610, 3 band, working $75. All plus shipping. Howard Kohlbenner, 2215 Clover Dr., Broomall, PA 19008 (610) 325-0354.

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Garod 6AU-1 Commander Table Catalin 1941 $1,200; Spice chest radio by Guild, $150 Send SASE for photo. David Walters, 13805 Florida Ave., Cresaptown, MD 21502 (301) 729-3133 before 5 p.m.

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Grebe CR-9, AMRAD, Crosley table and other battery and AC radios, literature, tubes and phonographs and records, etc. SASE for long list. Walt Sanders, 15 Todd Dr., Terre Haute, IN 47803 (812) 877-2643.

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Marconi-Reitz marble microphone c. 1925 complete with the four suspension supports. Substantial offers to: Enrico Tedeschi, 54, Easthill Dr., Portslade, Brighton, BN41 2FD, Great Britain, Tel/fax (01273) 410749.

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Quantities of vintage British and European light bulbs, new old stock, 11 various types from 1905 to 1925. Also have old brass bayonet sockets of Fleming valve type, $12 each. Fin Stewart, 1 Perouse Ave., San Remo, N.S.W. 2262 Australia.

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RCA 630TS TV chassis only, with 7BP7A pix (unused in original carton) tube. Set has following tubes: 1B3, 6SN7, 5V4, 6CA7, 3-6K6, 6K7, 6SH7, 6J5, 6AQ5, 6BK7, 6AL5, ?X6 with 7 missing tubes. $30 plus UPS. Edwin Kubes, 11 Aster Drive, DeBary, FL 32713 (407) 668-5858.

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Stromberg Carlson service buzzer Model 1914 (Sig. Corp. order #9640, 1917) in original leather case with min. straight key, coil, capacitors, sw.; Federal Orthophonic Model E10, cabinet only; Remler attenuators (similar to "pan-pots") Model LA30, cal in db:0-45, about 2½-in. diam. (have three). Hank Olson, 1751 Croner Ave., Menlo Park, CA 94025.

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Tubes, schematics, service notes, Riders, Sam's Photofact folders and transistor books, etc. for early radios. SASE for price list. Sam Faust, P.O. Box 94, Changewater, NJ 07831.

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## SELL — KEYS & TELEGRAPH

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Large list of keys — straight, bug, KOB, military. Also ephemera, parts and drawings. Refundable $2. plus 2 new stamps. Dr. J.H. Jacobs, 60 Seaview Terr., Northport, NY 11768, (516) 261-1576.

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## SELL — LITERATURE

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Aerovox Research Worker, 24 issues from June '55 to July-Sept. '60; Boonton Radio Corp. Notebook, 4 issues from Summer '58 to Fall '61 plus Index of Nos. 1-30; GE Techni-talk, the six-issue series on "Color Receivers" from '57-'58. $16. ppd. Leland Anderson, 2525 S. Meade St., Denver, CO 80219 (303) 922-7846.

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All copies of ARCA Bulletin, in mint condition with most in original envelopes. Best offer. Wes Chatellier, 1950 Chevelle Dr., Baton Rouge, LA 70806.

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ARRL Handbooks, some bound. Callbooks and old books, William Duck, etc.; Allied, like new; working kit receiver; 12L5, 117P7GT tubes.; all coils 26.5 mHz to 835 kHz; misc. keys, bugs, tubes; National coil forms XR-6-R39, 2 red, 2 green, 1 black, 2 blank. Barney Moffatt, W5CJZ, 5714 Trail Meadow, Dallas, TX 75230.

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Buy/Sale/Trade misc issues U.S. Amateur Callbooks. 1914 thru 1980 SASE for list. BobArrowsmith, W4JNN, PO Box 166, Annandale, VA 22003 (703) 560-7161.

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CQ magazine sale: 1947-1975 25¢ to $1.50 per copy. Available at May 6 Bloomfield Meet. Write: AWA, 59 Main St., Bloomfield, NY 14469.

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Magazine Sale: QST Golden Years 1924-1978 by year in binders or loose at 20¢ to $ 1.25 per issue. Available at Bloomfield Spring Meet, May 6. To reserve, call Bruce Kelley, 59 Main St., Bloomfield, NY 14469.

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Rider's Radio Vo. 7, 12, 13, 22 $22. ea.; Philco RMS books, 1940, 1941, $27 ea.; Sam's Record Changers Vol. 2 (1948), $12.; 1938 Zenith Service Manual, $20; Sylvania Tube Manual (1955), $14.; Bietman's 1948, $12. Includes shipping in USA. Send SASE with two stamps for complete list. Gary Micanek, 226 Henry Ave., Manchester, MO 63011 (314) 227-7046.

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The new book Behind the Front Panel by David Rutland on the how and why of 1920 radio circuits from crystals to superhets is available for $2,095 postpaid from David Rutland, 24280 Cardwell Hill Dr., Philpomath, OR 97370 (503) 929-3019.

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Riders Radio Volumes I-XXIII; Riders TV Vol. 1-28. Pickup or can deliver to 150 miles. SASE please. John Whiting, 18 Selma Blvd., Randolph, NJ 07869.

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## SELL — MILITARY

BC-348-Q, never modified & as removed from the aircraft. Interior excellent/very clean. External paint and front panel stencilling worn. Includes dynamotor and shock mount tray. $75 US funds plus shipping. Jack Erwin, VE3BHW, 41 Smith Crescent, Belleville, Ontario, Canada K8N 4K3 (613) 968-5800.

Navy OA-684/SRT transmitter group with AM-1008/SRT, MD-229/SRT, O-273/SRT, PP-1094/SRT, blowers, casters, all in CY-157/SRT cabinet with instruction book, RF tuner TN-229/SRT and antenna coupler CU-37/SRT excellent cond. and working. Pick-up only. Working teletype equipment with HAL ST-6 RITTY terminal, tape machine, lots of paper and parts in exc. cond. with all books. Pick-up only. Make offer. Richard LaMark, N2TXL, 6822 Tuckahoe Rd., Williamson, NY 14589-9589 (315) 580-2552.

Rare SCR-284A (BC-654A) power cable connectors from transmitter to GN-45 handcrank generator or PE-103A dynamotor. NOS set $20, 2 sets $30. Sam Hevener, W8KBF, 3583 Everett Rd., Richfield, OH 44286 (216) 659-3244.

## SELL — PARTS

Benwood spark wheel with motor and contacts, Pagent capacitor and helix. $75 for the lot. Howard Kohlbrenner, 2215 Clover Dr., Broomall, PA 19004 (610) 325-0254.

Photoflash capacitors, high quality, small size. 160 ufd, 330 v. 50 for $8, 100 for $15. plus postage. Gordon Wilson, 11108-50 Ave., Edmonton, Alberta, Canada T6H 0H9.

## SELL OR TRADE

Crystal radio set kits, and parts for old style radios. Send SASE for brochure. Carl Beier, 5636 Romeyn, Detroit, MI 48209.

EIMAC 4CX300A tube with socket and collar. $50 or best offer. James Mason, 90 NW, 150th Ave., Beaverton, OR 97006 (503) 644-2343.

Radio tubes, new and used, 4-5-6-7 pin, octal, ballast, etc. Most $1 or less. L. Gardner, 458 Two Mile Creek Road, Tonawanda, NY 14150.

## WANTED — GENERAL

Telegraph keys/bugs of unusual style or manufacturer. Will pay top dollar for early bugs before 1921 made without Vibroplex patents. Also interested in landline and spark era keys of quality. Gil Schlehman, K9WDY, 335 Indianapolis Ave., Downers Grove, IL 60515 (708) 968-2320.

1935-45 Meissner receivers like the 7502, Traffic Master or Traffic Scout. Any condition. BruceC.E. Russell, 370 N. Hythe St., Burnaby, British Columbia, Canada V5C 2K1 (604) 298-1038 (call collect).

Early Collins gear, accessories and mechanical filters. Brian Roberts, K9VKY, 3068 Evergreen Rd., Pittsburgh, PA 15237 (412) 931-4646.

Gonset 2 meter linear amplifier. Uses 2-826 triodes. Want early syle with square lower corners. Brian Mattson, K8BHZ, 6420 N. Manitou Trail, Northport, MI 49670 (616) 386-5129.

Looking for a Collins R-389/URR and/or Hammarlund SP600 VLF receiver. Must be in excellent condition and working, and I'll pay your price. Gordon Hullin, K2ZBU, 3666 Cold Springs Rd., Baldwinsville, NY 13027 (315) 622-0141.

16EP4A CRT, Stromberg Carslon 1303 tuning knob; Zenith Porthole G2350Z dial and volume knob; Airline 62-101 chassis. Keith Park, 795 Grooms Rd., Rexford, NY 12148.

Attention: At the 1994 AWA Conference I promised an individual some technical information on the McMurdo Silver 906 Signal Generator. Who was that person? Reginald G. Collins, 183-69 Brinkerhoff Ave., Hollis, NY 11412 (718) 454-5361.

Cabinets for Majestic Model 250-250M, Atwater Kent Model 60 floor model. Also looking for working chassis for Spartan Model 737 floor model. Nick Viania, 54 Neutral Ave., Staten Island, NY 10306.

Complete Kemper radio or chassis with three shafts in triangular shape. 4 5/8 in. spacing of bottom two horizontal shafts. Pay your price. Gordon Wilson, 11108-50 Ave., Edmonton, Alberta, Canada, T6H 0H9 (403) 434-6257.

GE meters (blackface, white printing), RF amperes, SC-15-89, type DW44 and volts, SC15-122, type AW41, in working order. Also want old brass case candlelabra screw light bulb sockets, any type, with or without switches. Fin Stewart, 1 Perduse Ave., San Remo, N.S.W. 2262 Australia.

Music Master 21 in. wood bell horn speaker with or without driver. Severin Dvorsky, 380 Morrison Dr., Pittsburgh, PA 15216 (412) 344-6633.

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Need schematic and or any info/alignment procedure, for Knight Model 195R communications receiver. Don Patton, 400 Pinewood Ct., Fern Park, FL 32730.

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RCA 100B speaker (working); AK 82 cathderal (working); cabinet for Bosh 48A console; chassis and front panel for Clarion 300 superhet series console. Will pay by cash or Visa card. Send photo and quote to Nicolo Rubini, v. Mazzini 7/c 35040 Masi PD, Italy.

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Rider and Supreme manuals; owner's manual for Philco 37-630; Heathkit HW-16 transciever (mint or unassembled). John Hoyler, 4604 W. Bayshore Dr., Bacliff, TX 77518 (713) 339-2491 9 a.m.-5 p.m. CST.

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Schematic and manual for Western Electric Model 3B receiver; General Radio 269 Variometer; Variometer similiar to Radiola III, but with one rotor; Hytron 114B or VT234 vacuum tube; 1276 tube; Heath VL Frequency Model HD1420 receiver; Waldrom dial plates, 4 in., 0-100 in 180 deg., need 5. Tad Drogoski, N3JZQ, 507 Coal Valley Rd., Jefferson Boro, PA 15025-3703 (412) 466-5950.

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Will the gentleman selling the antique Grundig reel to reel deck at the AWA Conference please contact me if you still wish to sell. Jim Addison, 171 Hartford Rd. A-7, New Britain, CT 06053 (203) 223-5141.

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Wiring diagram for a Leich magneto telephone #901B, mfg. 7-57; wiring diagram and induction coil for a Kellogg 1000 series magneto telephone #1170 Bakn. coil (may be a #114A). Allie Lingo, P.O. Box 118, Dierks, AR 71833-0118.

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**WANTED — INFORMATION**

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Any information on a Consco Model 5-60 radio. This radio appears to be a 1920s model with five 01As. Wayne Gilbert, 785 So. Flamingo Ct., Denver, CO 80222 (303) 321-6705.

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Does anyone have a trick for unfreezing the volume lever on a Radiola Model UZ-1325 horn, or can supply details of the construction of the driver element for this horn? Thanks. Jim Clark, 4149 E. Hampton Circle, Mesa, AZ 85206-3317 (602) 924-5582 evenings.

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Information, CD, etc. about Setchell-Carlson Model 501 five-tube transceiver using 1 V. loctal tubes. Have for sale Heathkit HW-16 transciever with VFO, mint, $125; Meissner Model 9-1065 radio/phono/disk recorder, $125. George Clemans, 851 W. Wooster St. Bowling Green, OH 43402 (419) 352-7198.

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Information, records, notebooks, etc., concerning Dr. Julius Edgar Lilienfeld, the Amrad Corp., or Ergon Research Labs, for biographical purposes. Brian Melody, 207 Roper Mountain Ext., Greenville, SC 29615.

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Plans for one, two and three tube broadcast and shortwave radios plus crystal sets from early 1930s radio magazines. Also QST magazines from 60s and 70s. Also want 2 knobs for Sparton Model 557 radio. Ernie Nagy, PO Box 822, Elk Rapids, MI 49629 (616) 264-9412.

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Schematics and manuals needed for Heath IO-14 Oscilloscope (lab type), General Radio type 1001A Standard Signal Generator (S/N 4241). Also need source of info for Heath scope CRT and a .01 mfd, 200v, 1% film cap used in sweep circuit. I will pay reasonable copying and postage costs. Dale Svetanoff, WA9ENA, PO Box 1317, Cryatal Lake, IL 60039-1317.

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Would appreciate information on a Zenith Trans-Oceanic Model 5H40 such as schematic/service manual/operating instruction etc., to aid my restoration of this set. Will gladly repay your cost. Thanks. Ken Forsyth, Box 13, Grp 117, RR3, Selkirk, Manitoba, Canada R1A 2A8.

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AWA Review, Vo. 1 & 2. Jack Gelfand, 44 Harbourton-Woodville Road, Pennington, NJ 08534 (609) 737-7964.

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Back copies of *OTB* before June 1984. Gene Reynolds, W3EAN, 53 Marple Road, Haverford, PA 19041 (210) 649-1447.

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Dept. of Commerce Radio Stations of the U.S. for 1913, 1915 and 1916. Bob Arrowsmith, PO Box 166, Annandale, VA 22003 (703) 560-7161.

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Manual or circuits for David Bogen CHB 50, Heathkits DX20, DX40 and HR10B. Fenton Wood, 108 Shoreline Dr., SH, Malakoff, TX 75148.

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Photocopy of service instructions and/or schematic diagram of a solid-state all-channel television channel-converter with infrared remote control, any brand, but not just a cable "block converter". W.J. Johnson, Jr., 1142 Hillsdale Ave., Pittsburgh, PA 15216.

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Radio Boys books by Chapman with original dust jackets. Henry O'Meara, 42 Aqua Ra Drive, Jensen Beach, FL 34957.

## WANTED — KEYS & TELEGRAPH

Rare McElroy keys/bugs or other vintage keys for private collection, any condition. Literature and boxes as well. John Rhilinger, KC1MI, 37 Pearl St., Boston, MA 02125 (617) 825-9763.

Still looking for JH Bunnell single earpiece headset and other JHB stuff. Dr. J.H. Jacobs, 60 Seaview Terr., Northport, NY 11768 (516) 261-1576.

Still want Mac Keys, McElroy one-tube code oscillator, empty (or full!) Mac boxes, pre-WWII sales literature, etc. Tom French, W1IMQ, "The McElroy Collector," 120 Great Rd., Maynard, MA 01754 (508) 897-2226.

## WANTED — MILITARY

Looking for WWII European military receivers for my collection. Give details, price and photo. Charles Newcomer, 100 Central Manor Rd., Mountville, PA 17554.

Philco cabinet (see photo pg. 40, Nov. 1994 *OTB* as pictured far left and far right, second row). Must have 18 inch clearance top to bottom. Also want four tubes, type 572B for Clipperton L linear amp. Have FREE *QST*s 1976 to date for club or organization in exchange for tax write-off. Have for sale floor model Victrola, c. 1920, plays OK, complete with crank, spare needles, but both front doors missing. Easily restored. Asking $50, pick-up only. Donald Miller, PO Box 3005, Springs, NY 11937 (516) 324-2546.

RCA Radiomarine receivers, especially AR-8504 and AR-8516. Dan Mason, RR1, Box 204F, Santa Fe, NM 87501 (505) 455-3416.

Speech input equipment, Navy Type CRV-50064 for Model TBl-13 Navy transmitter. Our museum has a TBL-13 operating in the CW mode, but needs the speech amplifier unit for audience particiapation. Ernest Farkas, Historical Electronics Museum, Inc., PO Box 746, MS 4015, Baltimore, MD 21203 (410) 765-2345.

Suggestions, comments and source of suitable military xmtr/rcvr for 30 meter use on USS Requin submarine restoration project. Brian Roberts, K9VKY, 3068 Evergreen Rd., Pittsburgh, PA 15237 (412) 931-4646.

WWII Japanese military radios of any kind. Takashi Doi: 1-21-4, Minamidai, Seyaku, Yokohama, Japan Fax: 011-8145-301-8069.

## WANTED — PARTS

4-pin glass or ceramic tube sockets with metal bayonet type mounts, for displaying tubes. Buy quantities or singles. Robert Ross, VA3SW, Box 1003, Stn. B, London, Ontario, Canada N6A 5K1 Tel. (519) 685-1167.

Cabinet (or junker) for Radiola VIIB. Also looking for Radiola IX. Would like details on Radiola VIIB cabinet. William Boyd, 74 Atsion Court, Medford, NJ 08055.

Chassis, speaker, knobs and schematic for Philco chairside radio Model 38-15 Code 124. Also need schematic for Advent Model 21 FM table radio and owners manual and/or sales literature for same, and Advent 201 cassette deck. Donald Nordenholt, 1509 Cliffbrook Dr., Plano, TX 75075-8725 (214) 423-9125.

Good type 10 and 210 tubes for Hartley transmitter; National or similar right hand dial similar to SW5 for homebrew 1930s regen. receiver. Thanks. Richard Cohen, 11802 Willow Point Way, Tampa, FL 33624 (813) 962-2460.

Good Atwater Kent audio transformer as found in AK, TA unit, AK Model 20 radios etc. Large tuning knob and face plate for AK type 11 tuner. Have Grebe filament rheostat from RORK for trade for type 11 parts. Bill Hurni, W3HWT, 329 Evergreen, North Wales, PA 19454 (215) 699-5787.

Grid leak for Atwater Kent Model 20 compact (2 meg, AK part #15892). Also need tuning parts for National NC-140 Thanks. Jim Clark, 4149 E. Hampton Circle, Mesa, AZ 85206-3317 (602) 924-5582 evenings.

Knobs for Zenith Model H845 or C845 (bandswitch, Zenith P/N S-53561; Tuning, P/N S-44167 or S-48094 (need 2). Also knobs and dial pointer for Zenith H723 (Zenith P/Ns 46-859, 46-860 46-900, 59-251 (pointer)). John D. Foell, PO Box 562, 7083 County Rd. 11A, Auburn, IN 46706-0562 Tel. (219)637-9501.

Music Master 21 in. bell horn speaker; Crosley Pup bottom plate; Radiola II case. Severin T. Dvorsky, 380 Morrison Drive, Pittsburgh, PA 15216 (412) 344-6633.

Old tube amps and transformers by UTC, Arco, WE. Peerless, Thordarson, Audio Dev. Corp., Jensen, JBL, Altec Speakers. Mike Somers, 2432 W. Fargo, Chicago, IL 60645 (312) 338-0153.

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Tube amplifier and transformers by UTC, ACRO, Western, Peerless, Thordarson, AudioDevelopment Co., Hadley, Jensen and JBL speakers. Mike Somers, 2432 W. Fargo, Chicago, IL 60645 (312) 338-0153.

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Two Crosley tuning knobs, 3 in. bakelite, part number 1994-?, as used in Models 50, 51, 52, XJ, 4-29. Dave McClennan, 1086 Trailridge Lane, Atlanta, GA 30338 (404) 399-6704.

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E.H. Scott and McMurdo Silver radios, especially sets with chassis sitting open on speaker cabinet. Mike Greene, 19113 Alpenglow Lane, Brookeville, MD 20833 (301) 774-3203.

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**WANTED — RADIO**

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Help me locate the following radio. In 1936-1937 Crosley produced a 37-tube console radio, model 3716, known as the WLW Super-Power radio. It has 4 chromed chassis and 6 speakers. Jim Clark, 1292 Starboard, Plemos, MI 48864 (517) 349-2249.

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Pre-1935 Buffalo, NY-built radios, speakers, parts, paper, misc. by Aragain, Branston, Federal, King, Larkin, Palmer & Palmer, USL, Wurlitzer, Carborundum Co.; all products from Promenette Radio & TV Co.. Joe Pawell, N2WEO, 6 Ausustine Ave., Ardsley, NY 10502 (914) 693-9374.

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Boy's and two transistor radios and parts sets. Needed: one sceptre-type logo plate (any name); three black coronet-type backs; one white coronet nameplate. Gary Willoughby, 5930 W. Jefferson Blvd., Los Angeles, CA 90016 (310) 559-0706.

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Federal Junior Crystal set and other crystal novelties. Ewrin Macho, Ambrosweg, 17/A/B, A-1230 Vienna, Austria.

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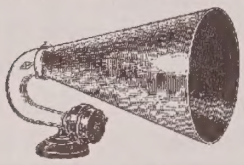


# THE LOUDSPEAKER

**EDITED BY**

Floyd A. Paul, W6THU
1545 Raymond, Glendale, CA 91201
Please include SASE with correspondence.

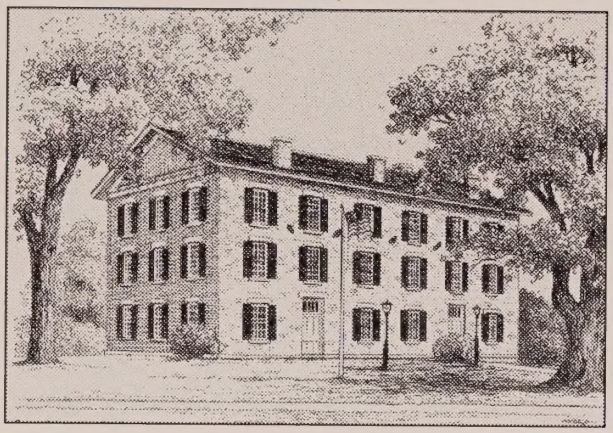

## CHARLES HERROLD — BROADCASTING'S FORGOTTEN FATHER

Charles Herrold (1875-1948) is one of broadcasting's forgotten fathers. From his wireless college in San Jose, CA, Herrold transmitted between 1912 and 1917 weekly programs of music and talk designed to entertain a small but loyal audience.

In an era when most wireless communication was code and the perfection of the vacuum-tube transmitter for voice several years away, Herrold was using an arc transmitter of his own design to present regularly scheduled broadcasts. He may have been ahead of his time. Most people know very little about his life, his work or his significance.

Mike Adams, professor of radio and television at San Jose University, has been researching Herrold for several years. Adams has interviewed historians, eyewitnesses, and Herrold faculty members in an effort to tell the Herrold story. A resulting one-hour documentary will be completed and aired in the near future over PBS stations. The AWA has provided much help in the way of photos, film, audio and comments on various versions of the script.

# THE MUSEUM



## RECENT DONATIONS TO THE AWA MUSEUM

(Parts, sets, magazines, books, etc.)

Fred Linn, W9NZF:Jack Williamson, W3JC; Floyd Paul,W6THU; Ross Smith; Bill Holley, K1BH; Joe Meyer, W2VW; Marshall Etter, W2ER; Robert Millard; John Donghia; Bob Ertman, K3BV; Fred Nor-vik,W2GH; Charles Lustick,K3HSS; Norm Smith; Barney Moffatt,W5CJZ.

The Museum has been the recipient of several nice donations including modern equipment from Bob Ertman and a Blake telephone from Ross Smith. A new room has been built in the Annex to house the large Moreau key collection. The W3WRE and Raser collections, in addition to existing AWA pieces, makes the museum's key/telegraph artifacts one of the leading in the country with nearly 1,500 pieces.

New exhibits for 1995: World War II spy equipment including a rare British MKII transceiver plus a model of the famous 1BCG station of Trans-atlantic fame.

### AWA Electronic Communication Museum

**FREE ADMISSION**

**Location:** Village Green, Rts. 5 & 20, Bloomfield, NY.

**Hours:** May 1 through Oct. 31 — Sunday, 2-5 p.m.; also, June 1 through Aug. 31, Saturday, 2-4 p.m. and Wednesday, 7-9 p.m. (Closed holidays.)

**Group Tours:** By appointment.

**Museum Telephone:** (716) 657-6260

**Amateur Station:** W2AN

**Mailing Address:** Bruce Kelley, Curator, 59 Main St., Bloomfield, NY 14469

# THE LAST ARCA BOARD MEETING

*The last board of directors' meeting of the Antique Radio Club of America (ARCA) took place at the 1994 Antique Wireless Association (AWA) annual convention in Rochester. ARCA is now assimilated into the AWA. Board members seated from left are: Lauren Peckham, Lloyd McIntyre (ARCA president), Bruce Roloson (AWA president), John Caperton, and Ross Smith. Standing from left are: Floyd Bennett, Joe Koester, Thomas Burgess, Geoffrey Bourne, John Terrey, and Ron Frisbie.*